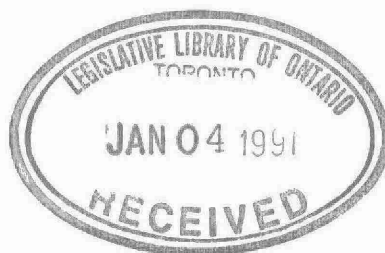


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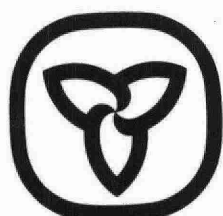
Environment Ontario in the Community



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Ontario

Ministry
of the
Environment

Hon. William G. Newman,
Minister

Everett Biggs,
Deputy Minister

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This book was prepared to introduce you to the Ontario Ministry of the Environment.

It outlines who we are and what we do—our responsibilities to this Province and its people and the structure and methods we have adopted to fulfill these responsibilities.

Its purpose is to open communication with you. This is a service organization, as well as an environmental protection and control agency, and communication is one of the foundation stones upon which service is built. We need communication within the organization to meet our responsibilities quickly and effectively and we need communication with our clients to provide proper environmental protection, restoration and management services.

Our client is you as an individual, a member of an organization and a citizen of the community.

In many ways, our success as a service organization depends upon you—upon the effectiveness of our communication with you and upon your co-operation and concern for your environment.

Together, we can keep Ontario beautiful.

Sincerely,
William G. Newman
Minister

Introduction and Historical Resumé

In the mid-1950's, responding to general concern about water and its purity, the Ontario Legislature passed the Ontario Water Resources Commission Act. This created the Commission or OWRC as it quickly became known, and gave it responsibility in areas of water quality, water supply and purification. The OWRC made rapid strides toward solving water supply problems throughout the province creating water treatment facilities to combat pollution. During its 15 years of operation, the Ontario Water Resources Commission established a world-wide reputation as one of the leading authorities in this field.

With the water-related programs underway, attention began to shift to other forms of environmental pollution. The Department of Health established branches in the mid-60's to investigate air pollution and pollution of the environment by waste disposal. Also a section of the Department, the Pesticides Control Service, began to find itself more and more involved with environmental matters as the broader ecological implications of pesticide use were questioned in the late 60's.

The dawning of the 70's saw the passage of the Environmental Protection Act, acknowledged to be one of the strictest documents of its type in North America, and the creation of the Department of the Environment. This department was comprised of the air and waste management and pesticides control sections from the Department of Health plus a branch that dealt with Ontario's conservation authorities.

Ontario then had two major agencies dealing with the protection of the environment, the OWRC and the Department of the Environment. However, it was felt that a more cohesive and co-ordinated effort

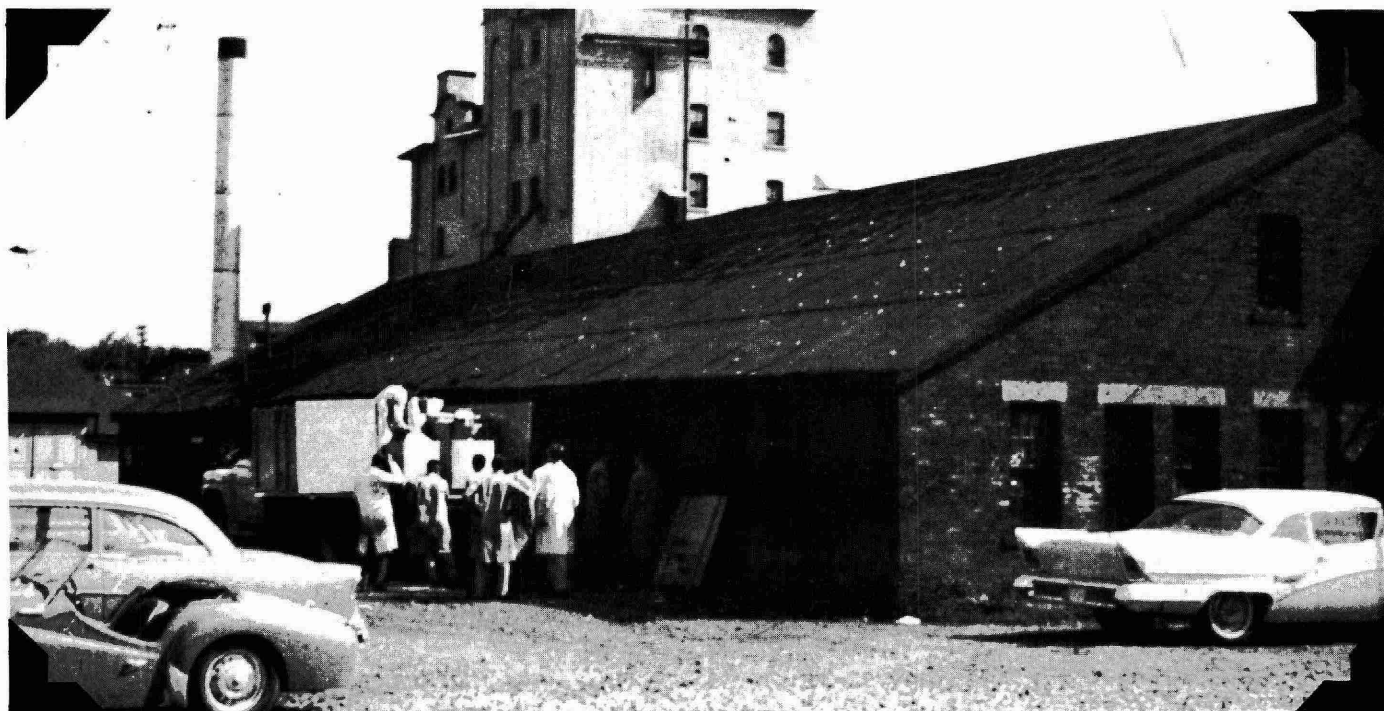
toward preserving the environmental quality of the province could be made by one organization.

With this in mind, the Ontario Ministry of the Environment was created in April, 1972, combining the OWRC, and the Air Management and Waste Management Branches and Pesticides Control Service of the Department of the Environment.

In April, 1974, the Ministry underwent a major reorganization which had two basic objectives. One of these was to regroup the staff of the Ministry so as to facilitate the achievement of four defined goals: control over contaminant emission; establishment of environmental safeguards in planning; improved management of waste and water; and the maintenance of restorative and enhancement measures. The other objective was to transfer the "delivery" of programs from Toronto to local communities throughout the Province, bringing service and control functions closer to the people they affect.

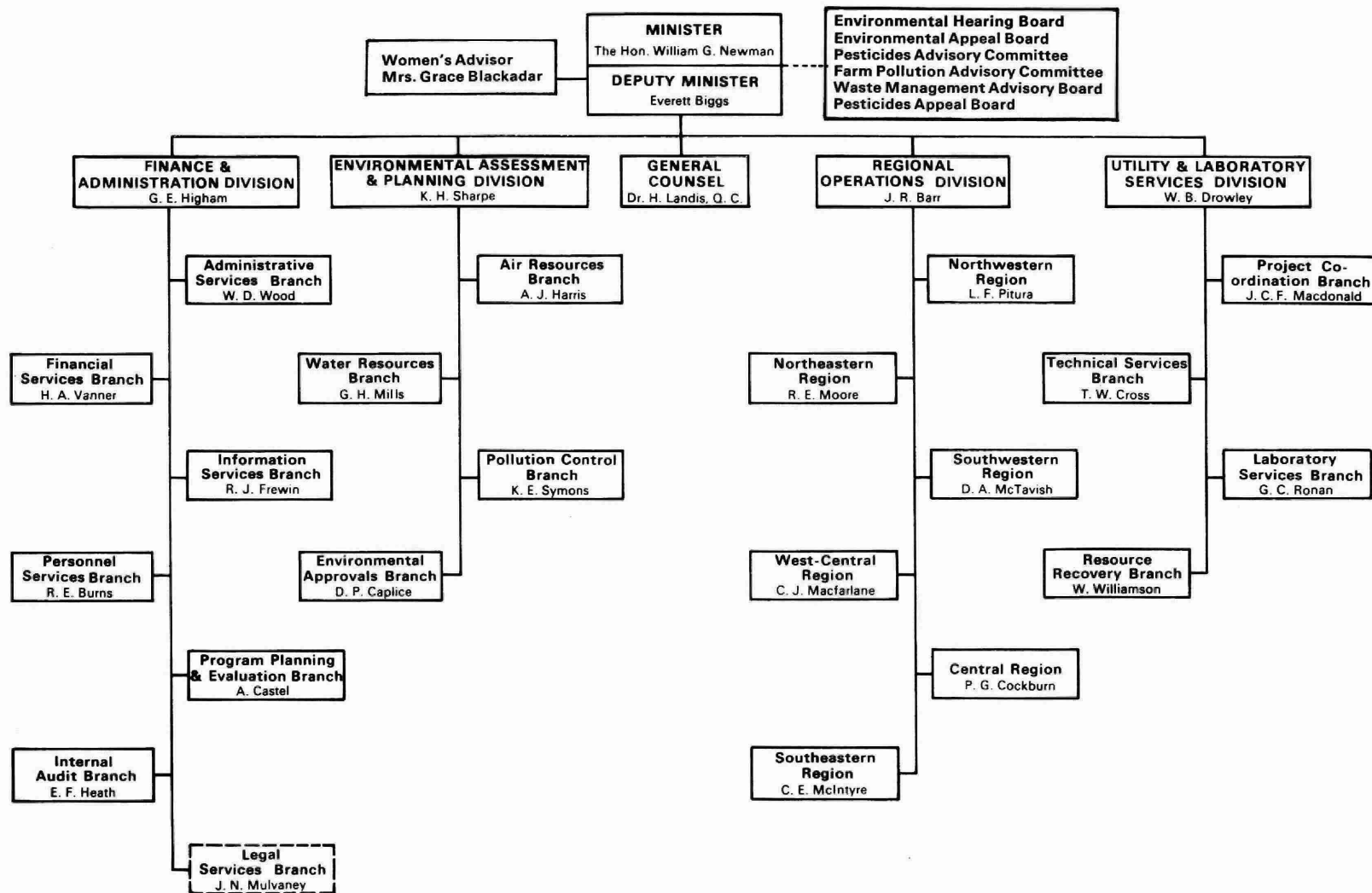
Regional offices, each of which may be regarded as a "Mini-Ministry", have been established in Kingston, Toronto, Hamilton, Thunder Bay, London and Sudbury. In addition, a number of district offices deliver more local service within each region. This brings the services the Ministry delivers into closer contact with the people needing them. Reorganization allows the Ministry to better fulfill its role, the overall protection of the natural environment to prevent its degradation by the activities of man.

The Ministry's staff is concentrated in four major divisions, each with a distinctive sphere of responsibility, supplemented by General Counsel who reports directly to the deputy minister with regard to legislation and regulations; and a number of boards which act in either review or advisory capacities.



First location of Ontario Water Resources Commission laboratory at 807 Richmond Street West, Toronto.

MINISTRY OF THE ENVIRONMENT



The Ministry

Policies and Management

In the Ontario Government, the Minister of the Environment is an elected Member of the Legislature, appointed by the Lieutenant Governor-in-Council and responsible to the Legislature for the Ministry. He presents new legislation and amendments to existing legislation within the scope of the Ministry of the Environment to the Legislature for approval and enactment. He is also responsible to the Legislature for the policies, programs, priorities and activities of the Ministry.

The Deputy Minister is the senior civil servant in the Ministry, appointed by the Lieutenant Governor-in-Council as the senior advisor to the Minister and responsible to the Minister for the administration of the Ministry and the implementation of policy.

His senior management staff consists of Assistant Deputy Ministers in charge of Environmental Assessment and Planning, Regional Operations and Utility and Laboratory Services and an Executive Director of Finance and Administration.

Special advisors report to the Deputy Minister on the drafting, review and revision of legislation and on the implementation of the Ontario Government's policy of equal opportunity for women Crown employees.

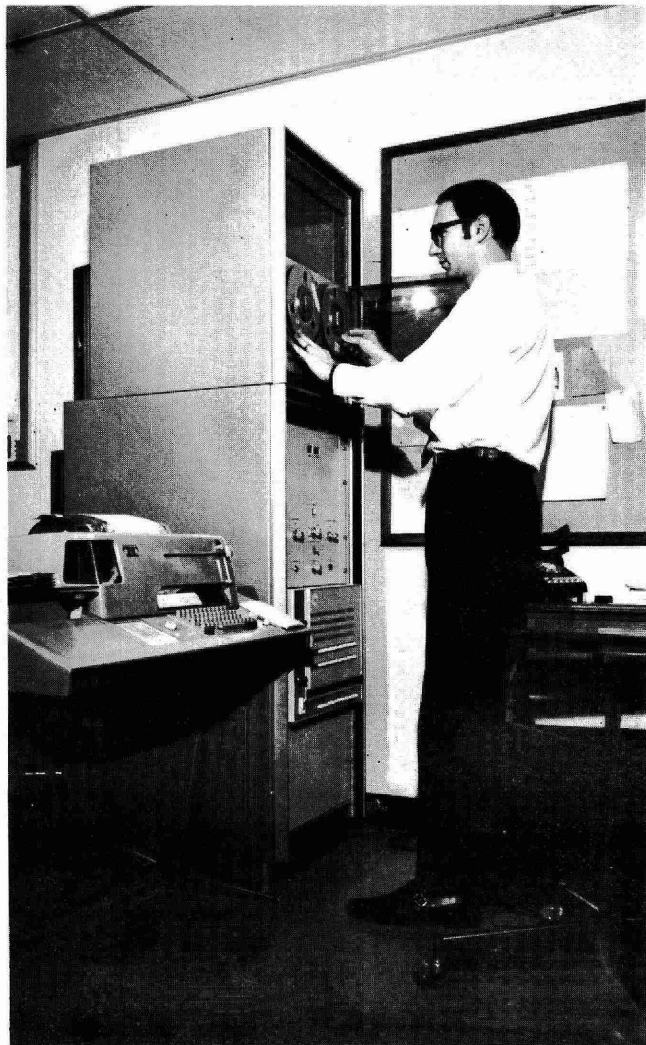
The Environmental Hearing Board, the Environmental Appeal Board, the Pesticides Appeal Board, the Pesticides Advisory Committee, the Farm Pollution Advisory Committee and the Waste Management Advisory Board hear appeals, provide advice or make recommendations to the Minister and his senior administrators in their special fields of interest.

Environmental Assessment and Planning Division

To permit the development of integrated environmental policy alternatives on a Province-wide basis, a high level of expertise is concentrated in one division, Environmental Assessment and Planning.

This Division is entirely separated from policy implementation. It is responsible for the operational performance audit of the Ministry's programs, the investigation into the capacity of the environment for assimilating various types and quantities of contaminants and investigation into new means of treating pollutants before they are discharged into the natural environment.

Four Branches contribute to the responsibilities of the Division: Air Resources, Water Resources, Pollution Control and Environmental Approvals.



Air Monitoring System Computing Centre

Air Resources Branch

The Air Resources Branch provides many of the assessment services to achieve the control of man's impact on the air environment by (a) forestalling undesirable effects, (b) monitoring contaminant levels, and (c) research and development efforts to ensure acceptable air quality throughout the province. The enforcement and surveillance activities are carried out by Regional Operations. The office of the Director manages all the activities of the Air Resources

group and provides service, as requested, to other Branches of the Ministry such as Regional Operations, Environmental Approvals and Pollution Control.

The Air Quality and Meteorology Section provides information regarding the quality of the air across Ontario. This information is obtained by direct measurements from nearly 1000 operating sensors and by computer simulation models based on emission data and meteorological information. Whenever concentrations of contaminants exceed levels which may have a detrimental effect on health, a telemetering system provides immediate information so that alerts may be issued and orders given for the curtailment of emissions.

Studies are carried out and consultation is provided on meteorological aspects of air pollution including the physical and chemical process affecting the transport, diffusion, and fate of pollutants present in the atmosphere. Information is provided for the establishment of Ontario's design standards and criteria for desirable ambient air.

The Vehicle Emission Section is involved in the control of the emission of pollutants from motor vehicles. Excessive smoke emissions from commercial vehicles are being controlled through the co-operative efforts of the Ministry of the Environment and the Ontario Provincial Police, under legislation provided in The Highway Traffic Act. Although the Federal Government became responsible for the control of automotive emissions in 1971 and introduced legislation which was identical to that in force in Ontario at that time, the Federal legislation only controlled the manufacturers. Control of on-road emissions is still a Provincial responsibility, so that this Section will continually work towards the updating of Provincial legislation as more effective and practical controls become available. The Ministry of the Environment, in a series of automotive pollution control lectures and demonstrations, is also assisting in the training of automotive mechanics at colleges throughout the Province.

The objective of the Phytotoxicology Section is to provide a comprehensive knowledge of the effects of air pollution on vegetation of all types throughout the Province. Its activity involves the identifying of contaminants, and establishing the degree and extent of air pollution injury to vegetation in the vicinity of existing sources. The Section is also concerned with the provision of pre-pollution baseline data in the vicinity of proposed sources, response to complaints and assessment of reported plant damage; the recommendation of air quality criteria and standards as related to vegetation effects; and the evaluation of sensitivity and resistance of various plant species to air contaminants and of the measures to protect vegetation from air contaminants.

The Technology Development and Appraisal Section conducts special projects such as the mechanism of formation of photochemical smog in Toronto, determination of the environmental limits of SO₂/SO₃ and metallics, absorption of pollutants on ambient particulate matter, etc.

It is also involved in development of instrumentation for ambient air monitoring and source testing with a special emphasis on remote sensing, and maintains a high standard for all stack testing conducted in Ontario. Revisions of the Source Testing Code include the latest developments in this field.

The Section monitors the air quality in specific areas and/or surrounding specific plants. It also identifies latent and potential future problems of air pollution in Ontario and conducts investigations into effects, sampling and analytical techniques, sources, etc. of unique and hazardous materials. It further assesses new technology and developments in major Ontario industries and new processes and equipment for air pollution control.

The Criteria Development and Program Planning Section recommends revisions to existing legislation; ensures that the published ambient air quality objectives for known contaminants are consistent with the current knowledge of physiological, vegetative and other adverse effects of air pollution; issues design standards for the assessment of air contaminant emissions from specific industries, processes and equipment; where necessary, recommends industry-wide regulations for control of contaminant emissions.

The Section also assesses the effects, on ambient air quality, of increased or additional sources of a common contaminant in specific areas of high source concentration.

Environmental Approvals Branch

The Environmental Approvals Branch reviews and approves all applications required by the Ministry under the Environmental Protection Act and the Ontario Water Resources Act. This permits an individual or an organization to seek and receive approval from one branch of the Ministry rather than from several branches.

Also within this Branch, environmental impact assessment activity is closely aligned with formal technical approvals. Environmental assessments have been carried out on activities of Ontario Hydro and the Ministry of Transportation and Communications, submissions from the private sector prepared on a voluntary basis and projects undertaken directly by the Ministry.

There are four distinct sections within this Branch. The Municipal and Private Approvals Section reviews and makes recommendations regarding the acceptability of all proposed water and wastewater treatment systems and all waste management facilities, either municipal or private, in the Province. The Section also reviews and makes recommendations concerning the issuing of licences and permits required for waste management systems. In addition, the Section develops design criteria and guidelines for use in the development of water, wastewater treatment and waste management systems to ensure that consistent and acceptable design standards are implemented.

The Environmental Assessment Section evaluates at the conceptual planning stage any activity by the ministries of the government, utilities, projects funded by the government and related activities in the



private sector, which will have a significant environmental impact. An opportunity is provided for members of the public to scrutinize environmental assessment documentation and to make representations directly to the government or, where necessary, at formal hearings.

The Land-Use Co-ordination and Special Studies Section acts in an advisory capacity to the Regional Offices, other Branches, other ministries, municipalities and the private sector to ensure that necessary environmental safeguards are incorporated into land-use policies and programs. The section is concerned with matters relating to the environment and land-use, such as subdivisions, official plans, planning and development proposals of regional significance, new town proposals, conceptual plans for water and sewer services, solid waste disposal facilities and river basin planning studies.

The Section is also developing an environmental management policy by undertaking special studies and analysing the cost benefits of specific projects and proposed policies. These studies explore such things as the ability of industry to finance and implement pollution control programs, the construction of a pilot environmental/economic model that will analyse policies and programs and demonstrate their effectiveness or otherwise and the cost benefits of alternative approaches in river basin planning.

The Industrial Approvals Section assesses the technical adequacy of all applications from industry required by the Environmental Protection Act and the Ontario Water Resources Act. The Section is concerned with the construction of facilities, involving equipment and treatment systems to achieve the Province's desired objectives and requirements for air and water quality control.

Processing of applications involves meeting with industry representatives to state Ministry requirements and to discuss treatment programs with other Ministry staff, recommending public hearings on applications where required by the legislation and on certain optional situations where large new plants could have an impact on the environment and where there could be local public concern. Further steps in the process involve recommending approval with or without conditions, rejecting and/or negotiating revi-

sions to applications considered by staff not to be acceptable and to prepare the appropriate Certificates of Approval according to the legislation. The section also processes applications from industry under the Pollution Abatement Incentive Act. This Act provides grants, equivalent to the retail sales tax, for pollution control equipment.

Water Resources Branch

The broad role of the Branch is to develop over-all water-quality and water-quantity policies, guidelines and criteria to ensure adequate supplies of good-quality water for the needs of the people of the Province. The Branch's programs are carried out by five sections.



The Planning and Co-ordination Section plans and co-ordinates detailed water resources surveys, major river basin water management studies and reviews environmental impact statements. It plans, co-ordinates and implements Great Lakes Survey programs to examine water quality conditions to determine abatement and remedial measures required to achieve desirable water quality in the Great Lakes. Co-ordination and development of water resources policy, guidelines and criteria, and ensuring their application, are also responsibilities of this section. The Hydrology and Monitoring Section contributes to the Branch function of developing policies and guidelines relating to ground-water protection and water resource assessment. It co-ordinates and directs inventory programs for water quality and quantity related to inland waters. The provision of geotechnical support for Ministry hydrogeological and ground-water development programs is a responsibility of this Section. The Section also administers a program for the licensing of water-well contractors across the Province. It participates in the development and application of uniform policies for the water taking permit program. Guidelines are developed for environmental impact statements relating to ground-water protection.

The Limnology and Toxicity Section performs a wide range of routine and special studies into the relationships between aquatic organisms and the chemical and physical characteristics of the water environment.

The Limnology Unit monitors water quality to determine the ability of lakes and streams to support fish and plant life, assesses the effectiveness of the phosphorus removal program and develops lake restoration techniques such as weed harvesting, destratification and the neutralization of acidified waters. The Toxicity Unit provides data on the harmful or lethal effects of industrial wastes, pesticides and other contaminants on aquatic organisms and contributes to the development of water quality guidelines and standards.

The Water Modelling Section develops, adapts and applies mathematical models and analytical methods to represent and predict the response of lakes, streams and ground water to withdrawals, waste inputs, pollution control measures, land-use practices and climatic conditions, in order to aid water-management policy development, planning and decisions and environmental impact assessment. The Section determines hydrologic, hydrogeologic and hydrochemical relations in representative areas to develop and test models.

The Data Systems and Administration Section designs, develops and implements systems that store, retrieve and process data that are related to the programs of the Branch.

The Branch provides a support function to the various Regions through technical advice, guidance, assistance and training. Support is provided by the various sections and includes such activities as: providing expertise in undertaking drainage basin studies, hydrologic studies and in assessing complex ground-water and surface-water interference and quality problems; determining lake current patterns and quality characteristics and suitable locations for water intakes and effluent outfalls; applying routine models and computer programs to predict the effect of changing waste loadings on streams and lakes; providing specialized biological expertise and laboratory support, including phytoplankton and zooplankton identification and enumeration and bioassays of pesticides, speciality chemicals, industrial wastes and other contaminants; developing study plans and providing advice on public participation in the development of water-management plans.

Pollution Control Branch

The Branch is responsible for the planning and development of policies and programs for the prevention, control and abatement of discharges or emissions of contaminants to the environment and for the assessment of the effectiveness of the programs. To meet these responsibilities, the Branch



operates through nine Sections which may be subdivided into three groups: Policy and Program Development and Audit, Contingency Planning, and Technology Development and Research.

The four Sections in the Policy and Program Development and Audit Group are: Municipal and Private, Industrial, Noise Pollution Control and Pesticides Control. Each has basic functions in assigned areas which include; the development of policies and programs for adoption by the Ministry, the development of standards, objectives and guidelines for emissions and sources of emissions, the development of appropriate legislation and regulations, and the appraisal of new treatment units and processes.

Other functions include the development and operation of central data, records and information systems for management purposes to serve all Branches and Regions, advising and consulting with delivery units on policies, programs, and standards, and providing expert technical advice to Regions, consultants and clients. These Sections also support diverse activities such as training, environmental assessment, prosecutions and International Joint Commission studies.

In addition, these Sections maintain external liaison with agencies, associations, and other groups with associated interests and responsibilities, identify and plan for potential program areas and administer the nutrient treatment portion of the Canada-Ontario agreement.

The Municipal and Private Section contains four units, namely; municipal water, municipal sewage, private sewage, and solid wastes. In addition to the coverage implied by the titles, the municipal sewage unit co-ordinates the nutrient removal program; the

private sewage unit deals with such diverse matters as boating, shipping, marinas, ice huts, and holding tank systems; and the solid wastes unit will be working with resource recovery research and evaluating new and innovative systems for the collection, recovery, utilization and disposal of wastes or its components.

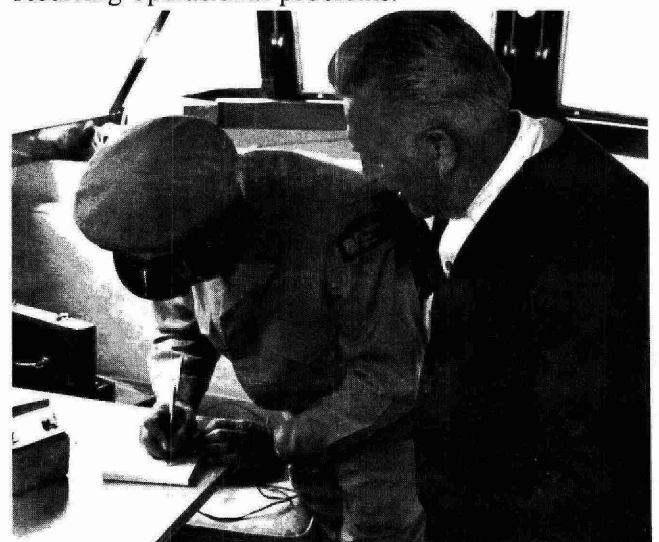
The Industrial Section deals with liquid, gaseous and solid emissions to the environment from industrial and institutional sources.

Within the Branch, regulations covering vehicle noise and stationary noise sources are being developed and tested. At this stage, the program also involves assessment and monitoring of noise, data collection, technical development and consultation with municipalities with respect to both municipal bylaws and municipal planning in relation to noise.

The Pesticides Control Section, in addition to providing for policy and program development will continue to issue many of the licences, permits and approvals associated with the program. Close liaison is maintained with the Pesticides Advisory Board which has the functions associated with the classification of products, and review of publications and legislation.

The Contingency Planning Section is responsible for development of the framework for meeting emergency situations and maintains close liaison with industrial, municipal and federal associates. In addition to assisting in the development of regional capacities, it responds to major field emergencies.

The Technology Development and Research Group operates primarily in the field of water, but is geared to wider service. Each of the four Sections draws its assignments from requests and referred problems, and provides expert advice and assistance in avoiding or resolving operational problems.



The Co-ordination and Technology Transfer Section is responsible for overall research co-ordination; for dissemination of new technology, for control of external research grants, or studies for miscellaneous research projects and for the research facilities.

The Wastewater Treatment Section conducts developmental research into municipal and industrial wastewater treatment processes and develops and evaluates wastewater treatment techniques and equip-

ment. Considerable attention is given to nutrient removal and sludge handling and disposal. The Water Treatment Technology Section develops, refines and evaluates processes and equipment associated with water supply, treatment and distribution. The work may involve full plant or laboratory scale studies.

The Applied Science Section provides a strong expertise in the field of soils and the movement and renovation of contaminants in the soil. It deals with private sewage disposal systems and with unusual or innovative concepts and processes that are broad in sense and application.



Regional Operations Division

Regional Operations Division is responsible for policy implementation and the delivery of Ministry services to the public.

This includes environmental protection activities such as abatement programs and complaint investigations, regional environmental assessment activities and the operation of sewage, water and waste projects.

Environment Ontario has divided service to the Province into six regions: Northwestern, with an office in Thunder Bay; Northeastern, with an office in Sudbury; Southwestern, with an office in London; West Central, with an office in Hamilton; Central, with an office in Metropolitan Toronto; and South-eastern, with an office in Kingston.

These regional headquarters are supplemented by district offices across the Province.

Both the district and regional offices play a key role in making the Ministry conveniently accessible to municipalities, the public and the organizations which are involved in or affected by its services.

A considerable amount of authority and responsibility is delegated to the Regional Director in the regional office. This office also provides a strong base of administrative rapport and technical expertise to back up the delivery of services within the region.

The program in the Region is carried out by four sections: Industrial Abatement; Municipal and Private Abatement; Technical Support (Environmental monitoring and planning); and Utilities Operation.

Industrial Abatement

The Industrial Abatement Section is responsible for the protection of the natural environment from emissions from industrial processes; from commercial, institutional and agricultural operations; from construction and demolition activities; and from certain activities of individual citizens.

This Section makes preliminary investigations into a wide range of environmental complaints, initiates abatement action and ensures that problems outside its jurisdiction are referred to the proper authority. It also provides information to industry and to the public on the current technology for controlling existing sources of pollution, for process changes when expansion is anticipated and for the disposal of hazardous wastes.

Industrial Abatement Staff conducts investigations into complaints of air, water and land contamination from the above sources, identifies possible infractions of The Environmental Protection Act, 1971 and its Regulations and The Ontario Water Resources Act and establishes appropriate abatement programs. Similarly, abatement programs may result from the routine industrial surveys made by the engineering staff of the Section. Such programs are normally negotiated on a co-operative basis or at times through court action. Where court action is necessary, the careful gathering of evidence may require many weeks of painstaking work involving direct observations by specially trained field personnel, the use of sophisticated monitoring devices or of soil, water or air sampling followed by physical and

chemical analysis. In this regard, the Industrial Abatement Section makes extensive use of the support capability provided by the Laboratory Services and Technical Support Sections of the Ministry.

Responsibilities under the Air Pollution Index and Alert Systems include surveillance and taking appropriate action for Metropolitan Toronto, Hamilton, Sudbury, Welland and Windsor. Other activities of the section include the gathering of source data for the Metropolitan Toronto emission inventory and mathematical model, on a continuing basis.



The Industrial Abatement Section provides on a regional basis, a 24-hour first-line engineering assessment and co-ordinating function under the Ontario Contingency Plan for transportation and other emergency spills.

In addition to contact with complainants and persons responsible for emissions into the environment, fulfillment of the above responsibilities requires liaison with related authorities at the municipal, provincial and federal levels, including local fire, police, health, by-law enforcement and works departments, the Provincial Health and Labour Ministries and the Federal Ministry of Transportation.

Municipal and Private Abatement

The Municipal & Private Abatement Section is responsible for the field program designed to enhance and protect the environment in matters relating to activities of municipalities and citizens.

Activities of the Section include surveys of liquid discharges to water for the purpose of detecting pollution emissions; surveys of land areas to locate litter and derelict vehicles; inspections of communal water and sewage works, waste disposal sites, marinas, boats, ice shelters, pesticide application, storage and sales, water wells, derelict vehicle sites, septic tank systems, sewage holding tanks and disposal sites for liquid waste from septic tanks, holding tanks and sewage treatment plants to ensure compliance with the Environmental Protection and the Ontario Water Resources Acts and their regulations; and, investigation of complaints regarding the protection of the environment.

Following the findings of pollution surveys, inspections and complaint reviews, a remedial program is undertaken, which includes issuing orders, reports,

directions, control orders and initiating prosecutions as required.

In addition, the Section monitors inputs to the environment, such as sewage treatment plant effluents; provides technical advice to municipal officials, consultants and citizens on matters relating to the protection of the environment; responds with the contingency plan framework to sewage overflows, breakdown in water supplies; pesticide spills; collects preliminary data to determine cause of fish kills; aids in the approval of waste disposal sites, sewage lagoons, sewage treatment plants and water works by undertaking site inspections; inspects works under construction to ensure they are installed according to approved plans; and, approves septic tank and sewage holding tank systems.

Utility Operations

The main purpose of the Utility Operations Section is to provide water and waste water service to municipalities. When the construction of works financed by the Province is substantially completed, the group assumes responsibility for the staffing, equipping, and continuing administration of the project. This work is accomplished through a regional staff of professional engineers, technologists, technicians, maintenance co-ordinators, plant superintendents and plant maintenance, laboratory operating, clerical and labour staff.



Utility Operations staff is familiar with plant and systems engineering and maintain a close liaison with consulting engineers, equipment suppliers and Ministry personnel in associated disciplines. By these associations and the review of contract documents, pre-selection of equipment, maintenance of engineering records and the assistance provided to other Ministry bodies in preparing suitable terms of reference, some uniformity and reliability of service is provided to participating municipalities. The group provides information for budgeting and multi-year forecasts of all projects.

Standards of operation, sampling, maintenance, reporting and appearance are established.

Quality control is provided by close supervision of plants and installation, both for Ministry and municipally operated facilities.

Close co-operation with participating municipalities is obtained through the formation of local advisory committees.

Technical Support

The Technical Support Section is involved with monitoring and evaluating changes in the environment; co-ordinating regional environmental impact assessment statements; and evaluating the effectiveness of the Ministry's abatement programs.

Four sub-sections make up the working units: Planning and Approvals; Air Quality Assessment; Water Resources Assessment and Laboratory.

The Planning and Approvals staff review official and subdivision plans, solicit comments from the abatement and assessment groups and co-ordinate comments about the Ministry's concerns for the possible effects of such plans on the environment.

The withdrawal of water from streams, lakes, ponds and wells is regulated by a permit program to ensure that withdrawals do not result in environmental degradation or in hardship to neighbouring water users. Certificates of Approval are issued to regulate a wide variety of activities which are likely to affect the environment.

The responsibility for these approvals is shared between the Regional Staff and Head Office staff in Environmental Approvals Branch. The Regional Planning and Approvals staff deals with more straightforward non-complex approvals and Head Office deals with more complex approvals including multiple-source installations.

Certificates are issued for the installation and operation of equipment emitting or discharging contaminants (gaseous, liquid or solid); for sewage treatment plants and systems; water treatment plants and systems; waste disposal sites; derelict motor vehicle sites and for other activities which affect the quality of the environment.

The Air Quality Assessment sub-section is responsible for monitoring and assessing the quality of the ambient air in the region. It provides the "feed-back" loop for the air programs of the Industrial Abatement Section.

The group establishes and operates an extensive network of sensors to obtain data on air pollutant concentrations and meteorological conditions. Special surveys are conducted to identify specific sources, determine whether they are in compliance with standards and criteria, and to provide air quality data for the preparation of impact assessment statements. New instrumentation and techniques to improve accuracy and sensitivity are continuously being developed and evaluated. The network is expanded to include new pollutants.

Data collected are analysed and interpreted to define air pollution areas, to assess the effect of industries on air quality, to establish planning and zoning regulations, to assess the effectiveness of abatement programs, to determine air quality trends, and to help assess effects of air pollution on health and damage to vegetation and materials. The Air Pollution Index is used to restrict the emission of pollutants whenever the value exceeds set criteria. The group assists in the development and assessment of future abatement strategy.

The Water Resources Assessment Group is responsible for: monitoring the quality and quantity of water within the region; responding to complaints on water interference or water quality; preparing impact assessment statements and undertaking resource assessment surveys of drainage basins and lakes.

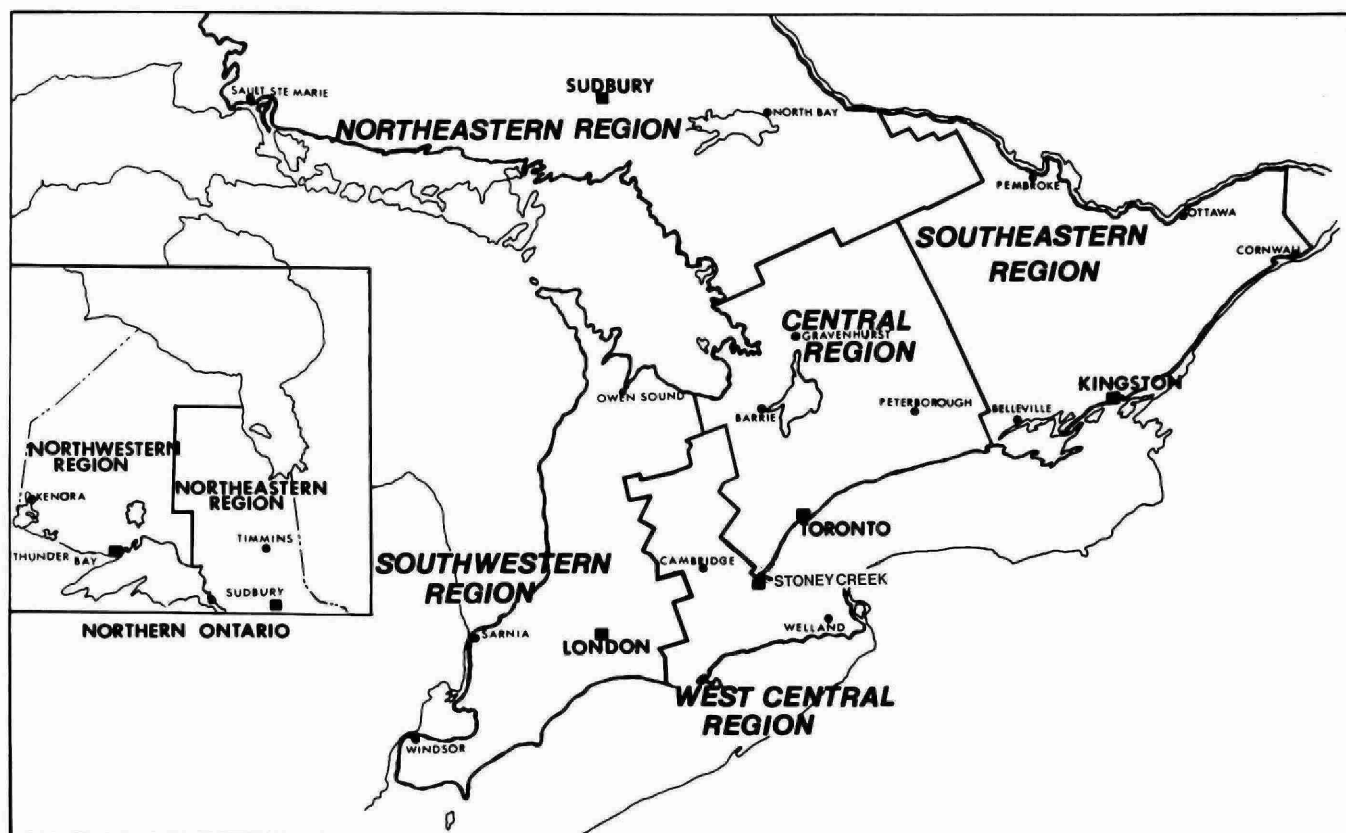
A network of surface water and groundwater stations for determining the quantity and quality of water is maintained and is expanded to meet development needs. A service to advise citizens wishing to drill wells is also provided.

Physical, chemical and biological sampling and analyses are conducted; impact of development on the quality and quantity of water are assessed; recommendations are made on what is required to minimize or correct degradation of the environment; methods are developed and utilized to determine the amount and variability of streamflow and groundwater storage.

The Laboratory staff conduct water, air, soil and vegetation analyses that are used to assess the quality of the environment. The following analytical services are provided; micro-biological analyses of samples from the aquatic environment; chemical analyses for standard quality parameters from the aquatic environment; chemical analyses on environmental samples for trace inorganic and organic constituents; chemical and physical analyses on air constituents and vegetation samples.

The Laboratory sub-section carries out a surveillance program on Provincial water supply systems; determines the type and level of pollution from waste discharges; specifies remedial action to meet objectives.

In the case of the Central and West Central Regions, laboratory service is provided by the Head Office Laboratory.



Utility and Laboratory Services Division

The Utility and Laboratory Services Division provides technical support, supervision and financial management to physical plants under construction with provincial funds to meet pre-determined quality standards. It also provides specialized technical services to various branches of Ministry operations.

The Division plays a key role in the development of housing and commerce in Ontario by providing the basic services of water supply and sewage treatment, in providing the analytical services and scientific expertise essential to pollution control and environmental protection, and in the recovery of waste materials.

Residents of Ontario currently generate over eight million tons of waste a year, most of which goes into landfill sites. Over a 15-year period starting in 1975, the Ministry intends to channel 90 per cent of this into resource recovery plants to recover materials for recycling and to thereby reduce the amount of land currently required for municipal waste sites.

Water and sewage treatment works are not only the essential means of providing potable water and proper treatment of municipal effluent for the communities they serve, they are also a major facility for pollution control and abatement.

Laboratory Services Branch

This Branch participates in the planning, implementation and the data interpretation related to a number of testing and sampling activities.

Chemical and biological analysis undertaken in the Ministry's central and regional laboratories helps to establish not only the existence, nature and degree of environmental degradation, but also the proper corrective measures and provides a valuable assessment of the effectiveness of these measures.

Branch staff also provide, when necessary, expert testimony for legal action undertaken by the Ministry.

In addition to providing economical, high quality, analytical services and scientific expertise, the Laboratory Branch continually refines existing analytical methods and develops new procedures and expertise for measuring and assessing new environmental pollutants.

There are five Sections in the Central Laboratory.

Air Quality Laboratory provides chemical and physical analysis on air constituents and vegetation samples.

Two Environmental Trace Contaminants Sections provide chemical analysis on environmental samples for trace inorganic and organic constituents.

Analysis of trace metals, anions and sediment identification form the bulk of the work of the Inorganic Trace Contaminants Section.

The Organic Trace Contaminants Section deals with isolation and identification of micro-organic pollutants.

Microbiology Section provides microbiological analysis on samples from the aquatic environment.

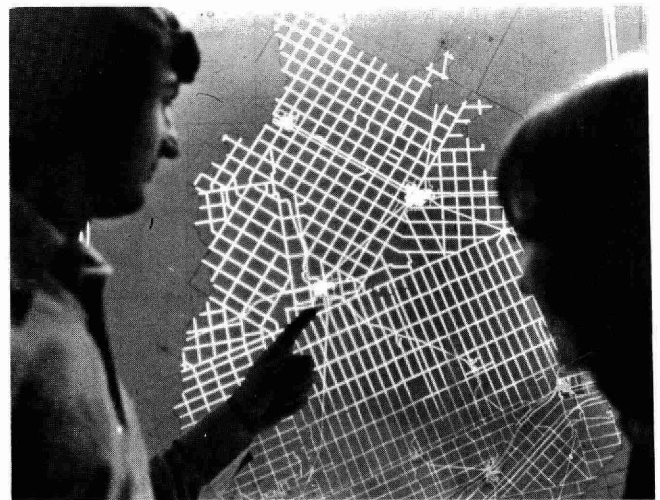
Water Quality Section provides chemical analysis for standard quality parameters on samples from the aquatic environment.

Project Co-ordination Branch

This Branch participates in the development of water and sewage treatment works, servicing policies and programs, and waste reclamation and other projects for the Ministry or other government agencies. It co-ordinates information from various government agencies related to the Ministry's provincially funded capital sewage and water projects, and supervises and co-ordinates the design and construction of these projects.

The Branch administers the application of provincial subsidies to both municipal and provincial capital projects and participates in the allocation of federal Central Mortgage and Housing Corporation loans for eligible capital projects.

The organization of the Branch brings a project management concept to the development and construction of the Ministry's works. Six project managers, each assigned to one of the Ministry's regions,



are responsible for the co-ordination and control of projects within their regions from the conception to the completion of construction, when the projects are turned over to the Regional Operations Division for operation. This system is designed to improve communication and liaison among Ministry staff, the municipalities and the consulting engineers participating in Ministry projects.

Other sections of the Branch deal with claims arising from construction, ground water development, property, special project development such as area programs, and municipal projects.

Technical Services Branch

This Branch offers a wide range of technical and operational services and carries the responsibility for the assessment and acceptance or rejection of the consultant's engineering designs for projects included in the Ministry's capital works program. This program increased to \$120 million for the year 1974/75 and continued escalation is visualized for several more years as the number, size and complexity of treatment projects continues to grow. In addition to design review, technical services are available to other Branches of the Ministry.

The increase in the capital works program has resulted in a greater degree of accountability in the manage-

ment of funds. This, together with receiving and opening of tenders, contract awards and contract payments, is the responsibility of the Budget Control Section.

A team of engineers and technicians skilled in the maintenance and operation of electrical, diesel and heavy machinery, and related instrumentation, provides assistance to plant operators. In turn, the information secured from maintenance and operation of equipment is transmitted to the design review team to be reflected in new design and equipment pre-selection. These same technicians are responsible for the inspection of projects under construction to ensure compliance with contracts and to make sure that instrumentation and equipment are installed correctly for efficient operation and long life.

Reorganization has recreated a big demand for technical training and retraining of Ministry staff. Training, Certification and Safety Section has the role of developing curriculums and arranging courses and

Resource Recovery Branch

This branch is developing and implementing a comprehensive waste management program for the conservation and recovery of resources throughout Ontario.

By 1990 the Ministry will establish a complete resource recovery program to service at least 90 per cent of the province. The Resources Recovery Branch co-ordinates this \$500 million program.

Recovering waste materials so they may be recycled for productive use is a relatively new field, and an area in which many technological advances are yet to be made.

To achieve this objective the branch has established an experimental research plant and centre at Downsview, in the metro Toronto area, for the purpose of testing processes and of assisting in development of new procedures for resource recovery and recycling.

Main function of the branch is to give assistance and guidance to municipalities in the economic development of integrated area waste management systems, which will then be serviced by resource recovery plants, constructed as part of the program by Environment Ontario.

The branch also works closely with the Waste Management Advisory Board in researching and forming provincial policy with regard to measures by which the quantity of waste can be reduced.

The long-term goal of the Ministry is to recover all valuable resources possible from waste, and at the same time to reduce the amount of waste produced. This will reduce the need for the landfill sites for garbage and other waste by as much as 80 per cent.

There are three sections in the Resource Recovery Branch.

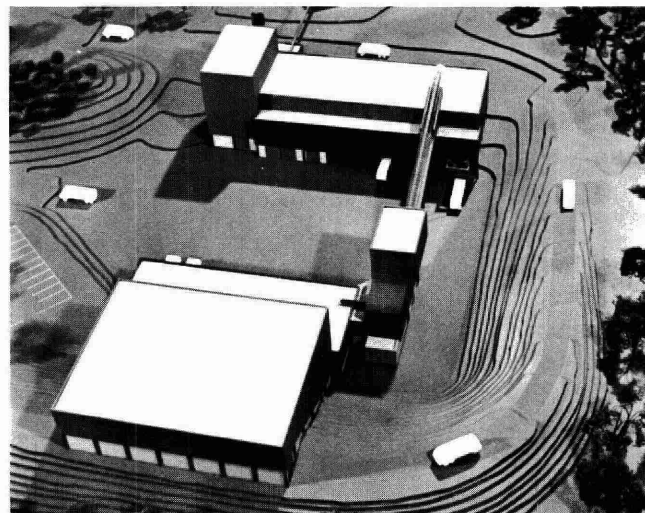
The Program Development Section deals with three areas: the co-ordination of the staged implementation of waste management throughout Ontario; the development of an information system model which will optimize the recovery of resources through the management of waste; and the development of a

seminars using technical staff from other Branches of the Ministry or from outside, as required. Safety training and safety inspections of Ministry operations are provided by an experienced staff.

A wide range of mapping, drafting, artistic design and reproduction services is provided by the Cartography and Drafting Section with a small staff of well trained and experienced personnel.

The Marine Services unit operates the fleet of five vessels on the Great Lakes which meet the sampling requirements of the Water Resources Branch. Maintenance and service are provided for this fleet and for some of the smaller runabouts used in the water sampling programs. A staff of qualified marine Captains is carried to navigate the larger vessels.

The Instrumentation Section provides calibration services to the air quality monitoring network. It also evaluates new instruments and audits field maintenance of instrumentation.



resource recovery program which can meet the demands of rapid changes in technology.

It helps with the development of provincial systems to handle the recovery of waste — the location and design of reclamation plants, and the improvement of local waste systems aimed at reducing the amount of land required as fill sites.

The Technology and Market Development Section provides technical support, advice and consultation to the Ministry, other government agencies, universities, consultants, industries and municipalities in matters related to waste processing and resource recovery. It evaluates the potential of new technology in this field for practical application through the operation of the 200-ton-per-day experimental plant in North York, and co-ordinates the development of markets and uses of recycled resources.

The Project Development Section develops, in co-operation with municipalities, efficient waste management and recovery systems. It handles projects through the initial stages of planning, construction and financing up to the establishment of management operation and training of operators.

Finance and Administration Division

The functions of the Finance and Administration Division fall into three broad areas: Service, Control and Co-ordination. Some of the branches have responsibilities in all three categories.

Services include providing information to the public, legal advice to senior officials, employee counselling, development of systems, payroll preparation, etc.

Some of the control functions exercised by the Division include ensuring that jobs are classified according to standards set down by the Civil Service Commission, the allocation of accommodation in line with standards administered by the Ministry of Government Services, and limiting expenditures to the levels shown in the annual estimates as approved by the Legislature.

The co-ordination activities involve liaison with the central agencies, including the Resources Development Policy Field Committee, Management Board, Civil Service Commission, Ministry of Government Services, etc. This liaison covers such functions as the multi-year plan, procurement of accommodation, staff recruitment, etc.

with regard to consistency, fairness and economy which transcend individual Ministry operations. Part of the responsibility of the Division is to ensure that the Ministry conducts its functions within the broader framework established by the central agencies.

Financial Services Branch

The Financial Services Branch performs a dual role by providing financial support services to the Ministry and its staff while ensuring that all expenditures and revenue transactions conform with Provincial and Ministry approved controls.

In its support function the branch provides a wide range of services to both staff and management. These range from processing payrolls and expense reimbursement for staff, and the subsequent distribution of cheques, to the maintenance of all Ministry financial records. Other services include providing advice and assistance on the development of new procedures, the interpretation of established financial policies and regulations, and the production of financial reports and information.

The reporting of financial information involves the production of actual expenditure data, comparison to budgets, detailed project cost and public accounts statements as well as analysis, assessment and recommendations concerning the adequacy of service rates charged for provincial sewage and water works. Due to the variety of the Ministry's financial activities, the branch must maintain constant liaison with the municipalities, other Provincial ministries and several federal agencies.

In its control function the Branch is responsible for ensuring that all the Ministry's expenditures and revenue transactions are conducted in accordance with the approved Provincial and Ministry policies and procedures. The total expenditures processed are not to exceed the appropriations approved by the Legislature. The Branch also administers the control of all financial terms contained in project agreements, cost-sharing agreements and Ministry legislation

which imposes the responsibility of collecting and recording all sums due to the Ministry.

Legal Services Branch

This Branch provides a wide range of legal services to support the implementation of the policies and programs of the Ministry, including the prosecution in the courts of companies and individuals for violations under The Environmental Protection Act, The Ontario Water Resources Act and The Pesticides Act.

In addition, the Branch provides legal advice to the operating Branches, prepares Orders-in-Council, regulations, contracts and orders.

Program Planning and Evaluation Branch

The Program Planning and Evaluation Branch conducts operational and policy evaluation studies relating to environmental planning, environmental control, resource recovery and administrative support services. This includes the development of output measures for assessing program effectiveness and efficiency.

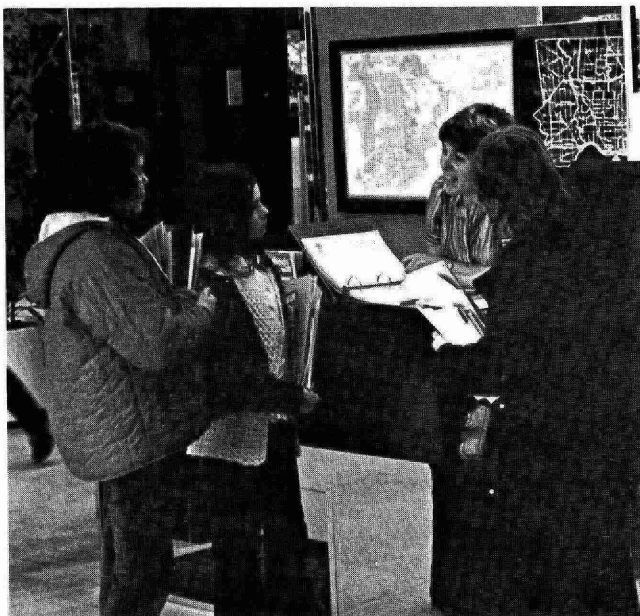
A major responsibility of the Branch is the development of the multi-year plan, from the initial policy submission to the completion of the annual estimates. The Branch also co-ordinates all liaison activities with program co-ordinators, both within the Ministry and the Resources Development Policy Field and also fulfills the Ministry's requirements to the Policy and Priorities Board, the Policy Field Committee and Management Board.

Information Services Branch

Information Services Branch presents and interprets the Ministry of the Environment's programs and policies to the general public and a number of specific client groups interested in or involved with environmental activities, as well as serving as a resource centre for environmental information. It assesses information needs and initiates appropriate information programs.

The Creative Services Section produces photographic film and other audio-visual material, and graphic design to support information and Ministry programs, as well as acting in an advisory capacity to other Branches. The Section is also responsible for co-ordinating the design and production of Ministry pamphlets, brochures and reports.

The Information Programs Section plays both an active and an advisory role in public contact, media relation, information and education and exhibit programs for the Ministry and its branches on a province-wide or regional basis. In co-operation with Creative Services, the Section prepares and produces the necessary material for these programs. Office Services provides support service and distributes information material to the public.



Administrative Services Branch

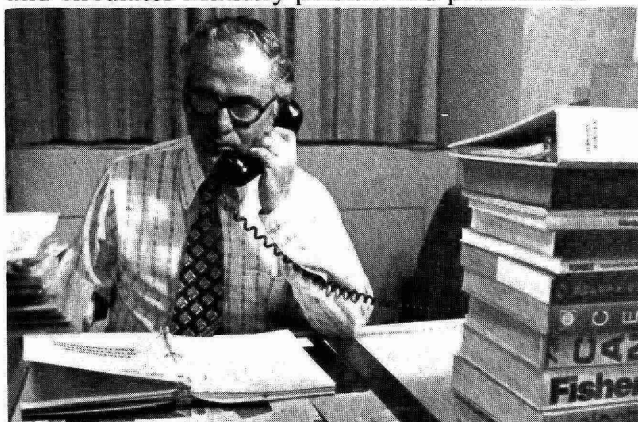
This Branch consists of a number of sections which provide various administrative and support activities for the operating programs of the Ministry.

Library Services Section procures, catalogues, maintains and circulates relevant texts, literature and reference material.

Office Services Section assigns accommodation and space to staff, manages and controls records and documents and provides telephone communication and mail services.

Printing Services Section designs, manages and controls forms and manages in-house printing, contract printing and word-processing systems.

Procedures Manual Section edits, up-dates, publishes and circulates Ministry policies and procedures.



Supply Services Section purchases, inventories and disposes of assets, and manages Head Office stockroom and laboratory stores — motor vehicle maintenance and production shops.

Systems and Electronic Data Processing Section designs, implements and maintains Ministry information systems and data banks.

Personnel Services Branch

The Personnel Services Branch performs both ad-

visory and control roles for the Ministry. The prime emphasis is placed on advising management on matters concerning both organizational structure and employees.

A personnel officer is assigned to each operating branch of the Ministry to maintain understanding of operations, philosophy, management and employee concerns of that Branch.

The Staffing Section provides specialist advice on staffing problems and assumes the responsibility for advertising and following up positions in promoting the career concept within the Ministry through effective use of job competitions. The section conducts continuous recruitment for clerical stenographic and entry-level professional and technical positions within head office as well as co-ordinating summer student and government recruitment programs such as SWEEP (Students Working in an Environmental Enhancement Program).

The Organization Development and Manpower Training Section plans, develops, presents and supports a wide variety of courses, seminars and workshops in addition to assisting supervisors and managers in identifying specific organization problems.

The Employee Relations Section is responsible for establishing and maintaining an effective employee relations program through collective bargaining, employee counselling and exit interviewing, retirement services and specialist services pertaining to employee benefits and working conditions.

The Audits and Standards Section maintains a monitor on the Ministry's application of classification and staffing standards to ensure uniformity in the recruitment, classification and processing process.

The Office Services Section is responsible for processing documentation affecting classification and salaries in addition to providing internal clerical support for all professional staff.

The Personnel Services Branch recognizes that the people who make up the Ministry are the single most valuable resource available to its proper functioning, and, as such, are committed to programs that are responsive, effective, and optimize the utilization of its human resources.

Internal Audit

The Internal Audit Branch carries out a comprehensive program of financial and operational internal audits throughout the Ministry with the objective of independently evaluating the effectiveness and efficiency of the systems of internal control designed to protect and safeguard Ministry interests and assets and its revenues and expenditures.

In carrying out its program of internal audits, the Branch performs a vital service to middle and senior Ministry management through the preparation and issue of in-depth audit reports which identify specific problem areas of internal control and sets out proposed audit recommendations for the correction of these control deficiencies.

COMMISSIONS AND COMMITTEES

*** The Environmental Hearing Board:**

The Environmental Hearing Board conducts public hearings at the discretion of the Minister, to review and make recommendations on the environmental impact of major development proposals.

Environmental Appeal Board

The Environmental Appeal Board considers appeals against a variety of decisions made by Ministry directors under the Environmental Protection Act and the Ontario Water Resources Act. These appealed decisions include the issuance of control orders, the withholding or renewal of certificates of approval and the imposition of conditions in issuing licences, permits and certificates of approval.

The Pesticides Advisory Committee:

This committee is responsible for the classification and researching* of pesticide products for sale in Ontario, related specifically to their environmental impact and safety. It also reviews annually the Pesticides Act and other government publications, to recommend changes or additions to the Minister.

Farm Pollution Advisory Committee:

The Farm Pollution Advisory Committee provides advice to farmers on the proper and normal farming practices in the disposal of animal wastes.

Waste Management Advisory Board:

This Board is a policy analysis group which acts as an advisory body to the Minister on problems and issues in waste management as required, and on recovery of materials and energy resources from waste.

Pesticides Appeal Board:

The Pesticides Appeal Board reviews submissions in appeal to licensing decisions of the Ministry's Pesticides Control Branch.

Special Advisors:

Two special advisors report directly to the deputy minister.

A women's advisor co-ordinates the implementation of the Ontario Government's policy of equal opportunity for Women Crown Employees.

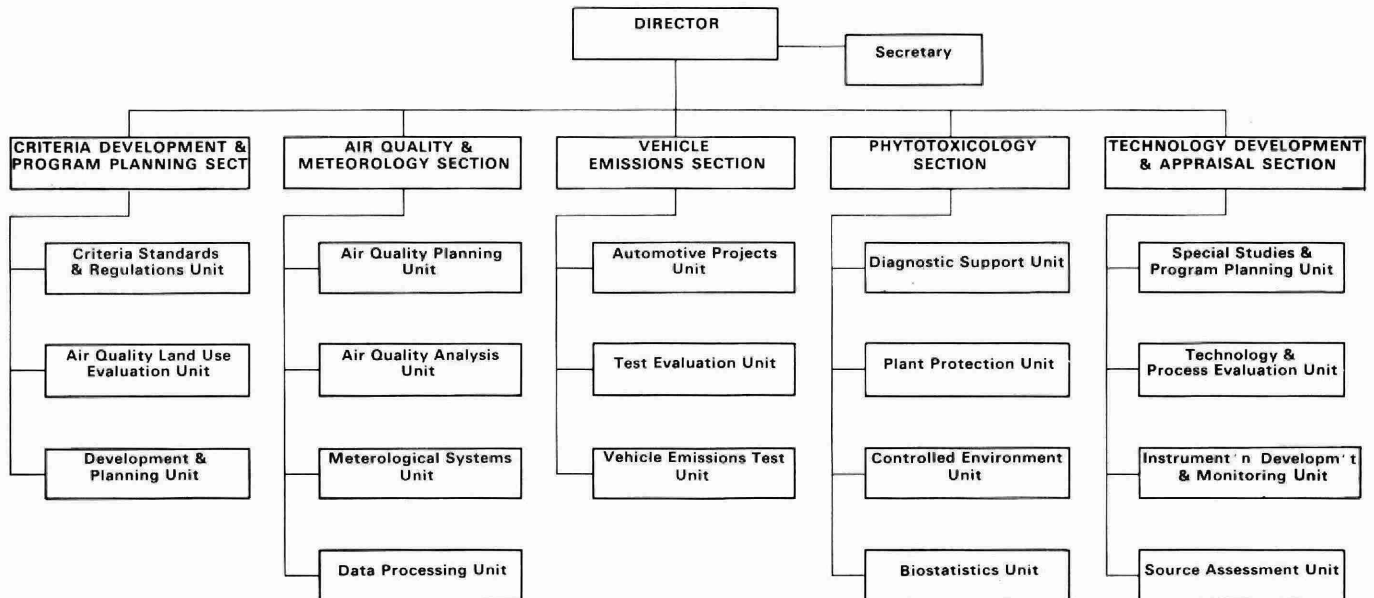
A general counsel is responsible for the drafting, review and revision of the legislation which provides the authority for the Ministry's policies and programs.

***Note:**

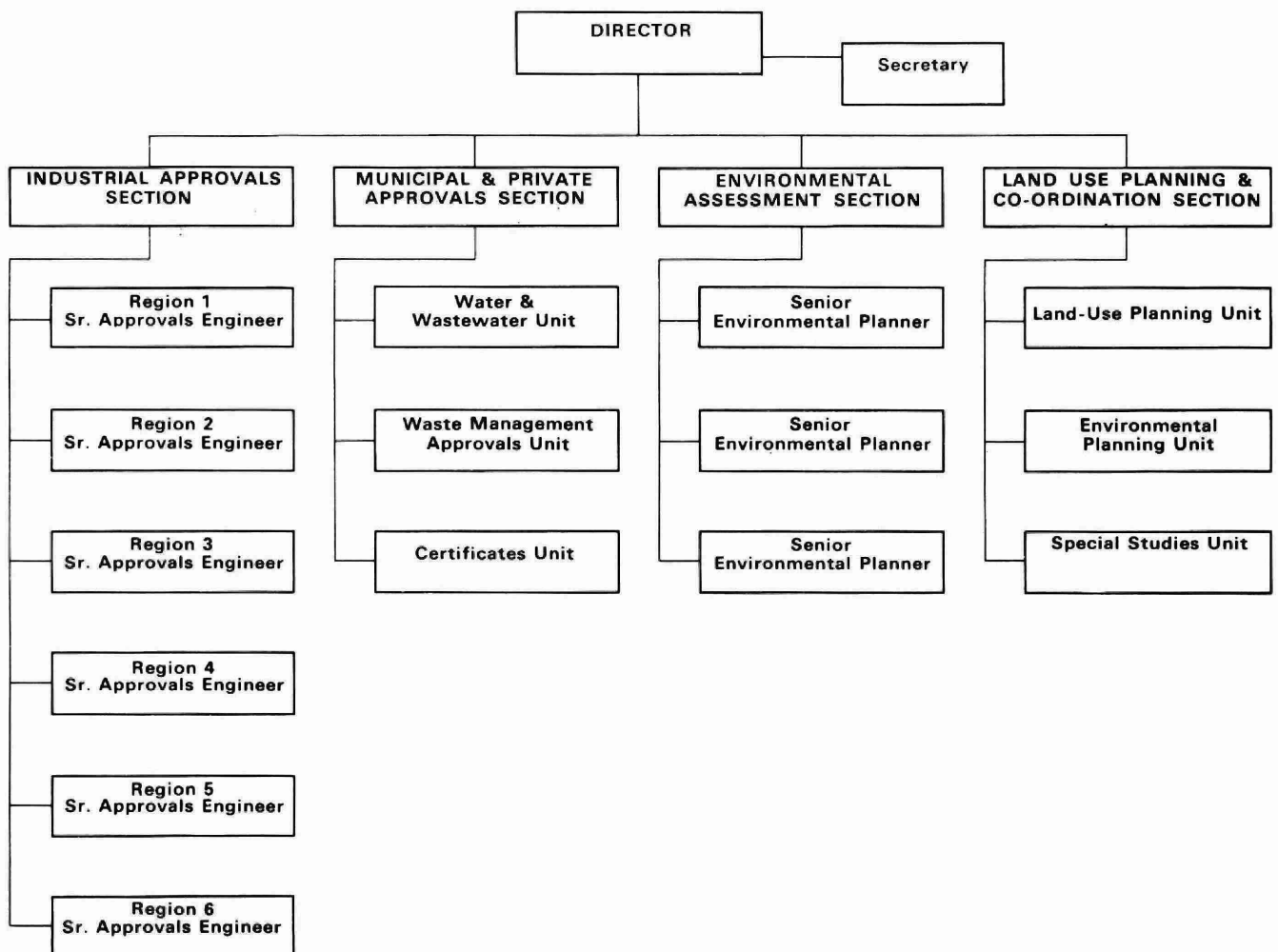
The Environmental Assessment Board, when appointed, will assume the duties of the Environmental Hearing Board and will hold hearings under the Environmental Assessment Act.

ORGANIZATION CHARTS BY BRANCH & REGION

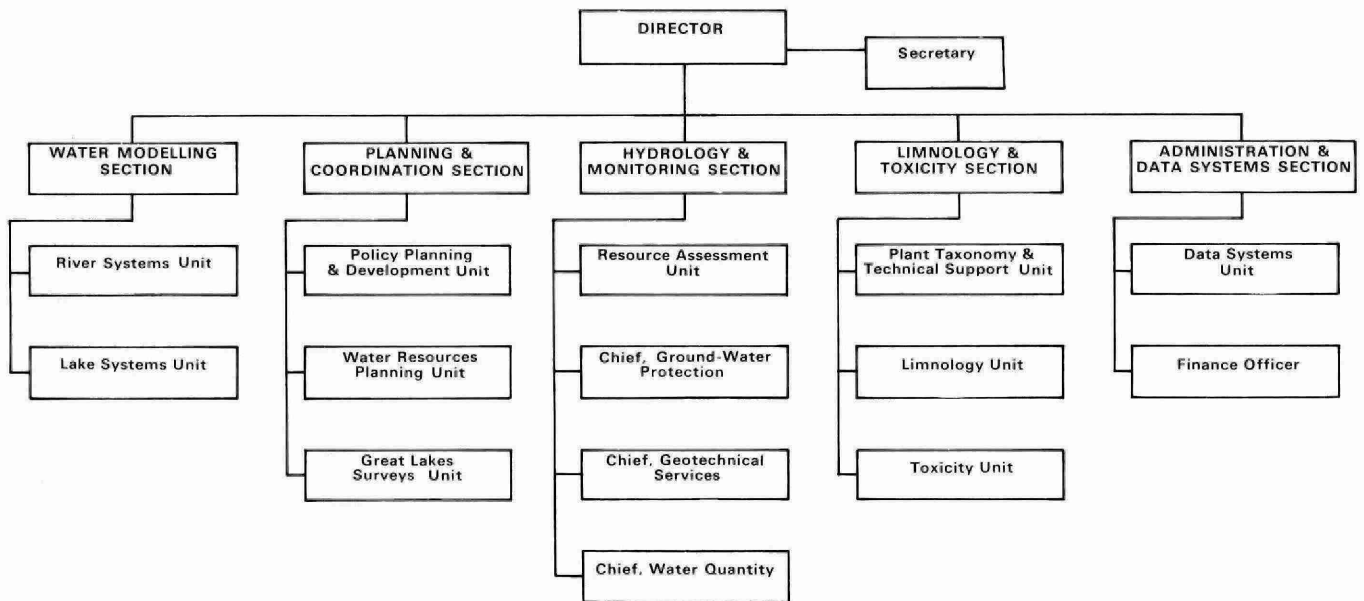
AIR RESOURCES BRANCH



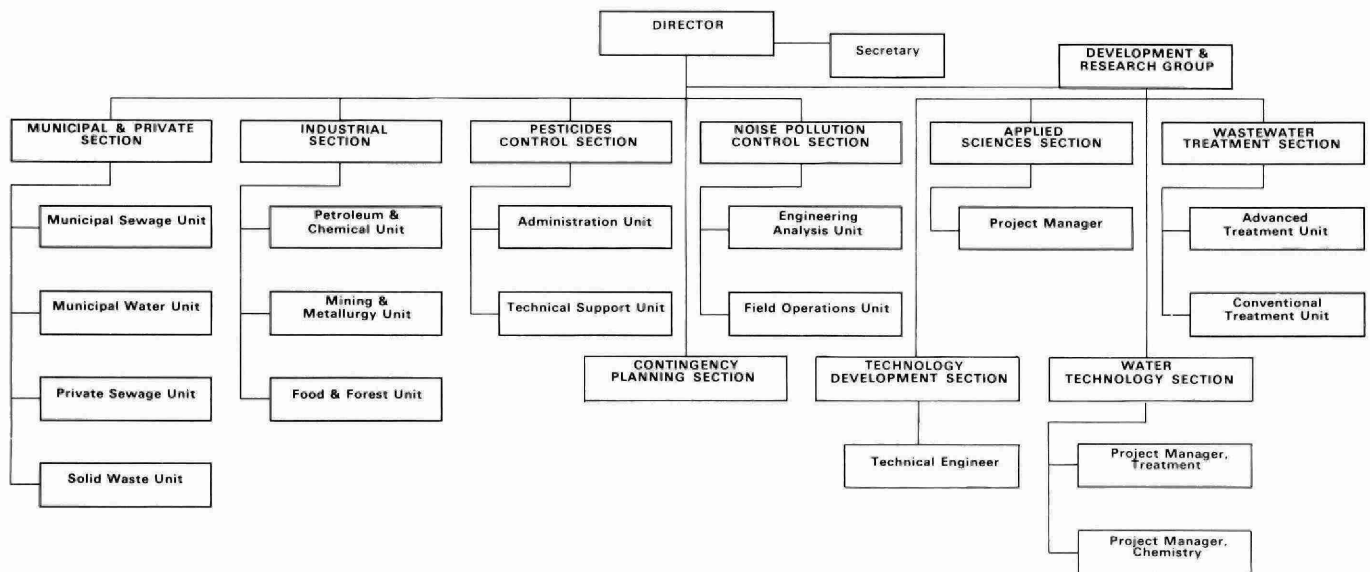
ENVIRONMENTAL APPROVALS BRANCH



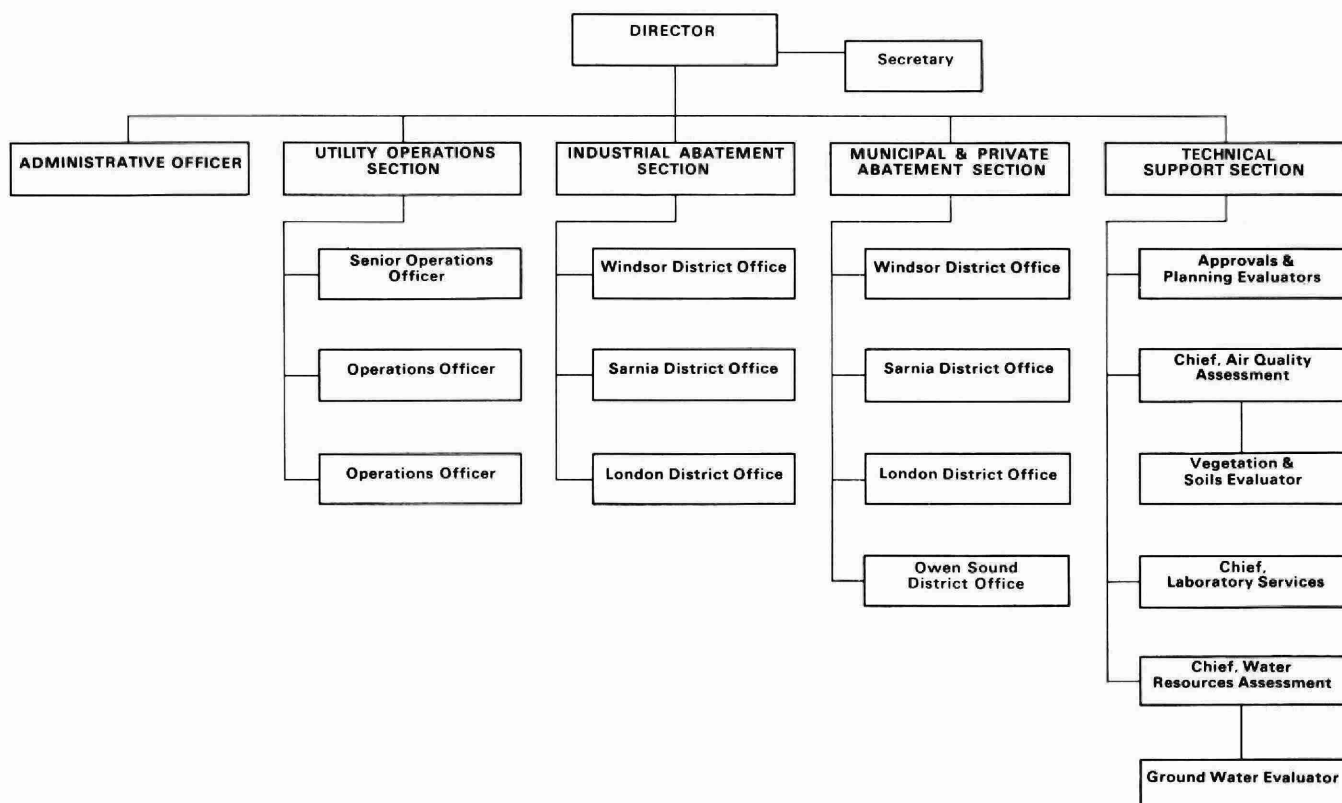
WATER RESOURCES BRANCH



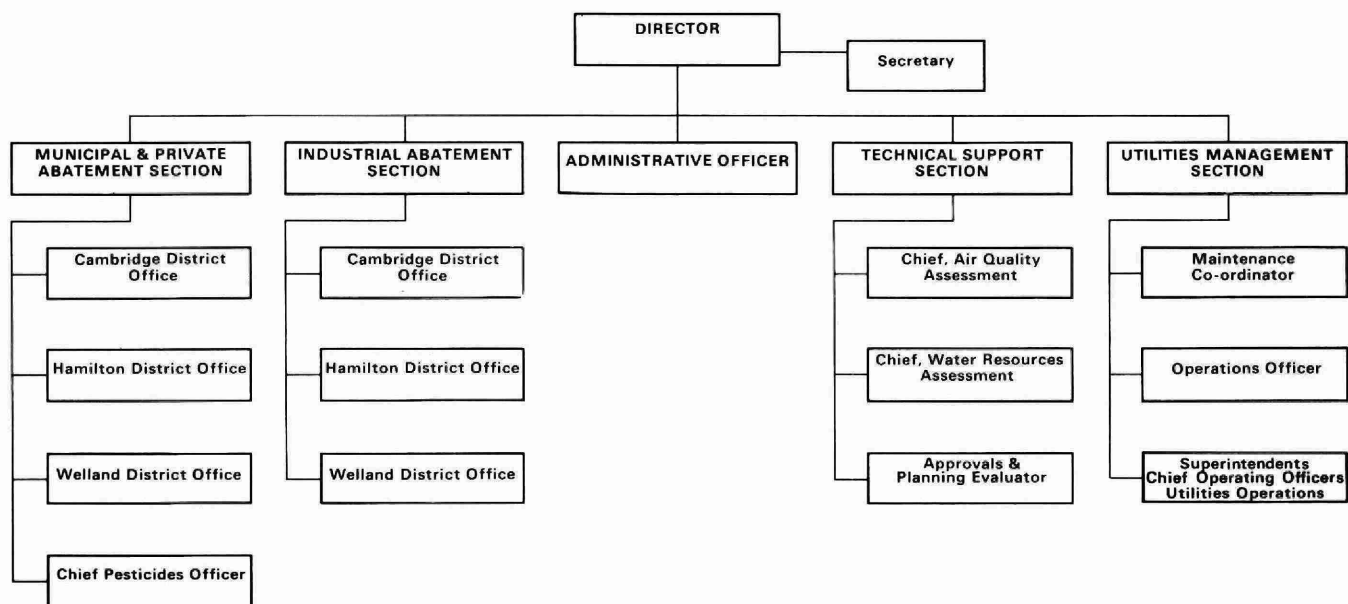
POLLUTION CONTROL BRANCH



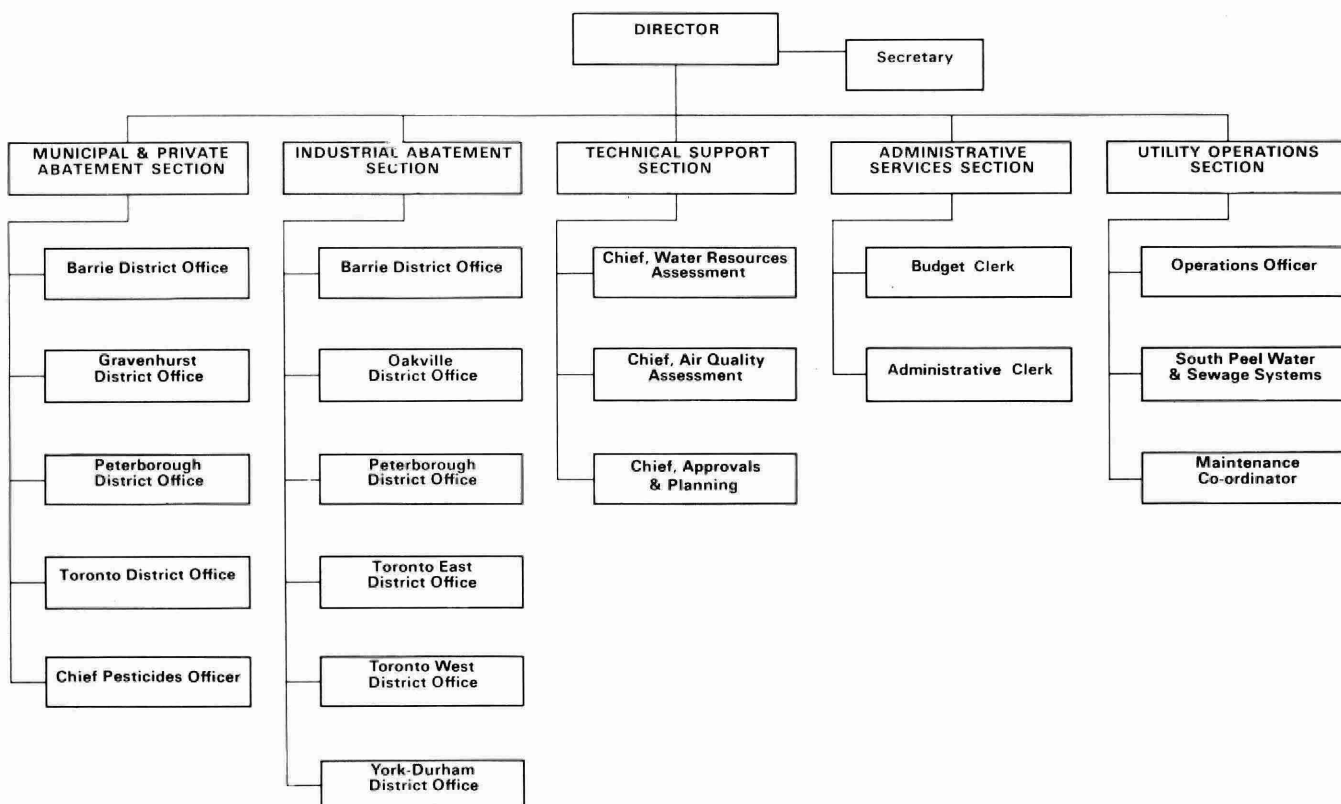
SOUTHWESTERN REGION (1)



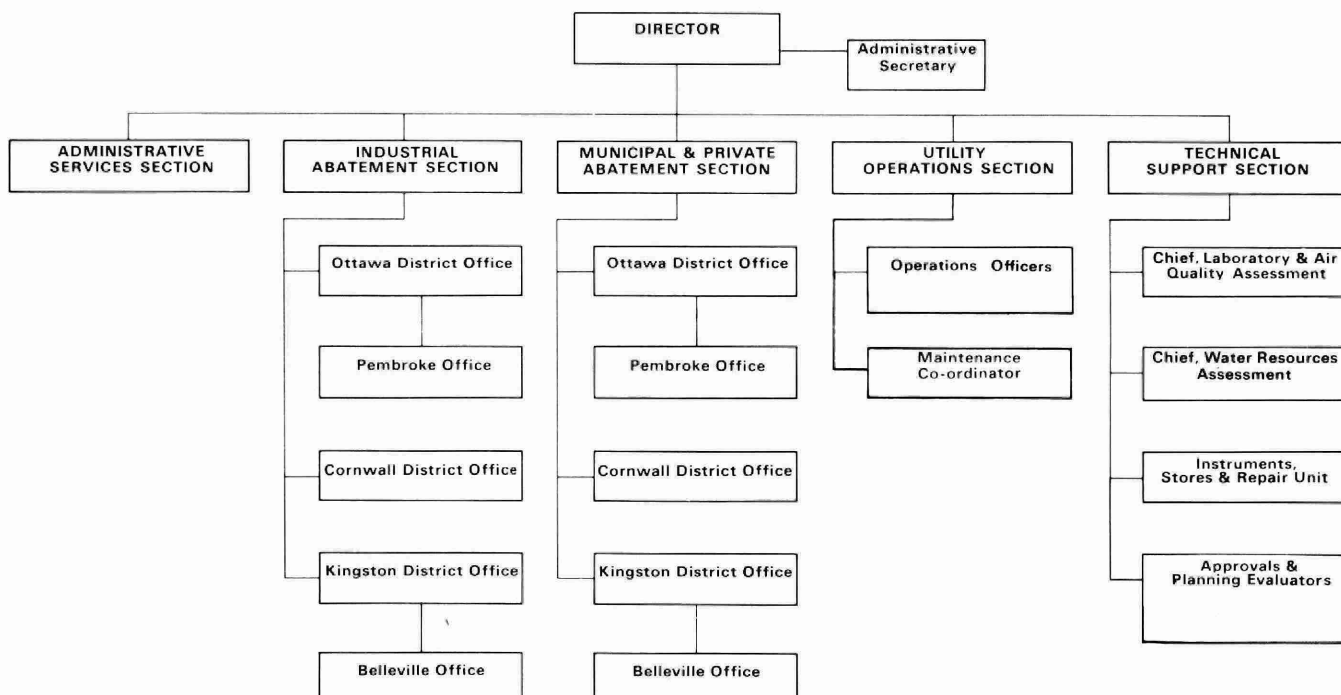
WEST CENTRAL REGION (2)



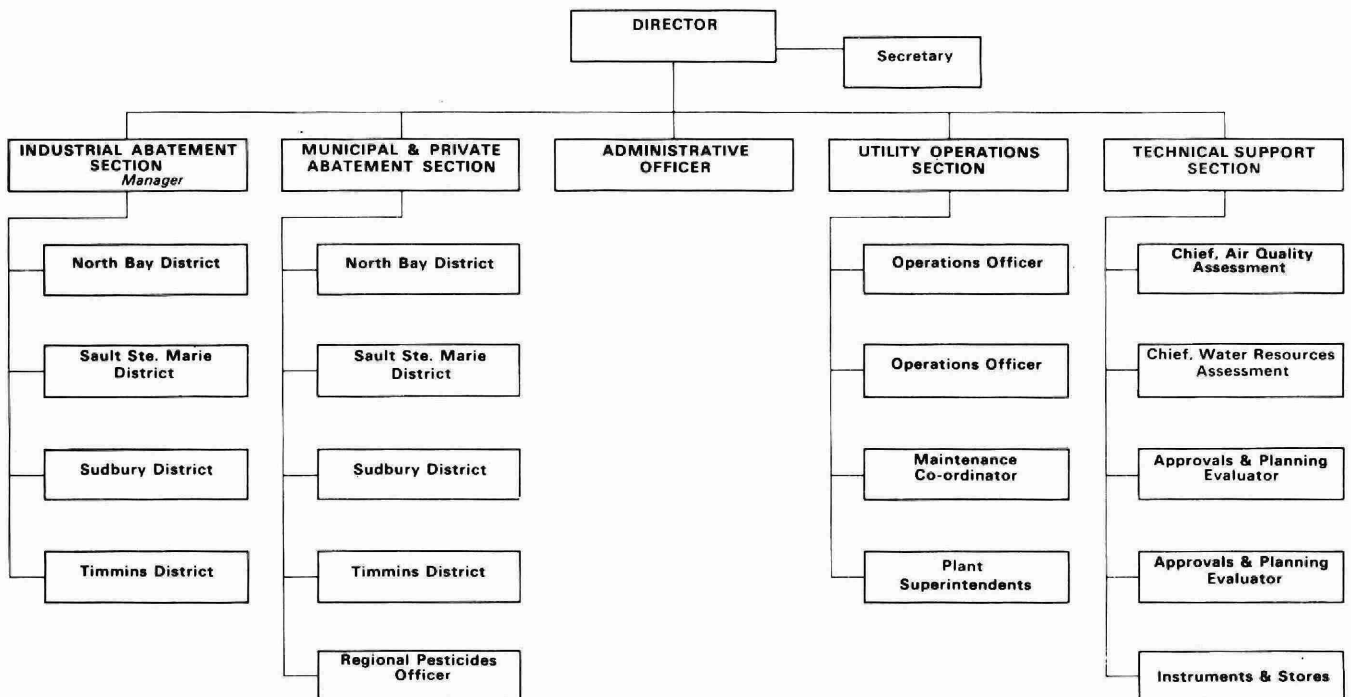
CENTRAL REGION (3)



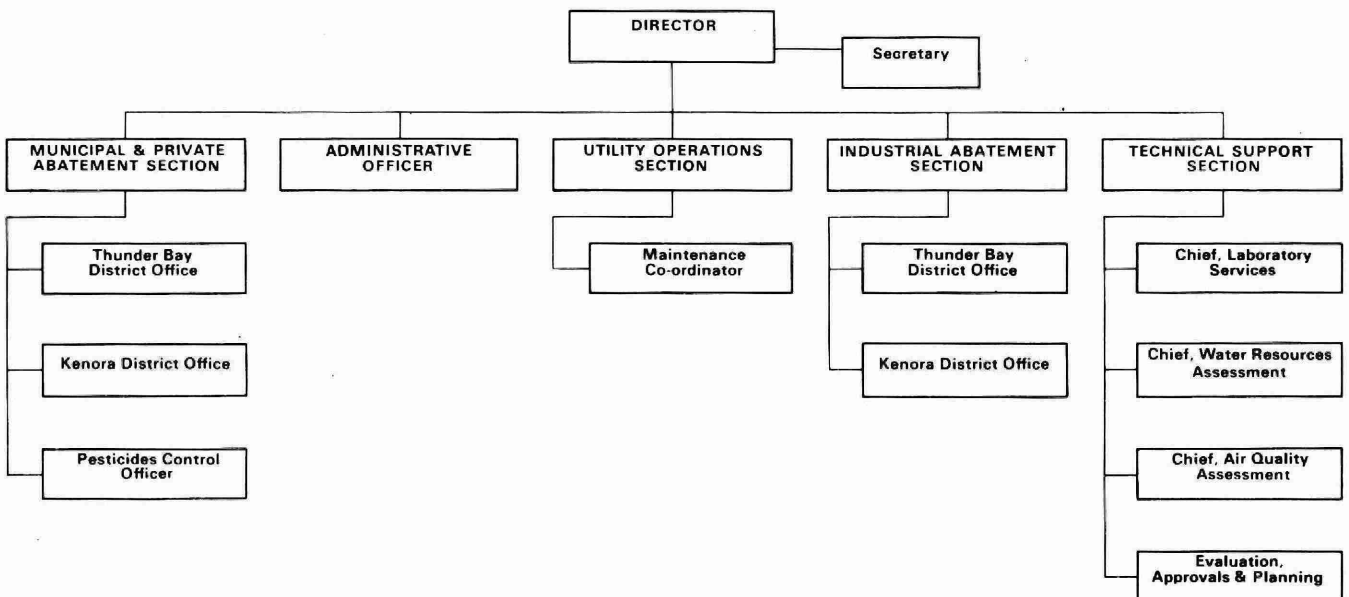
SOUTHEASTERN REGION (4)



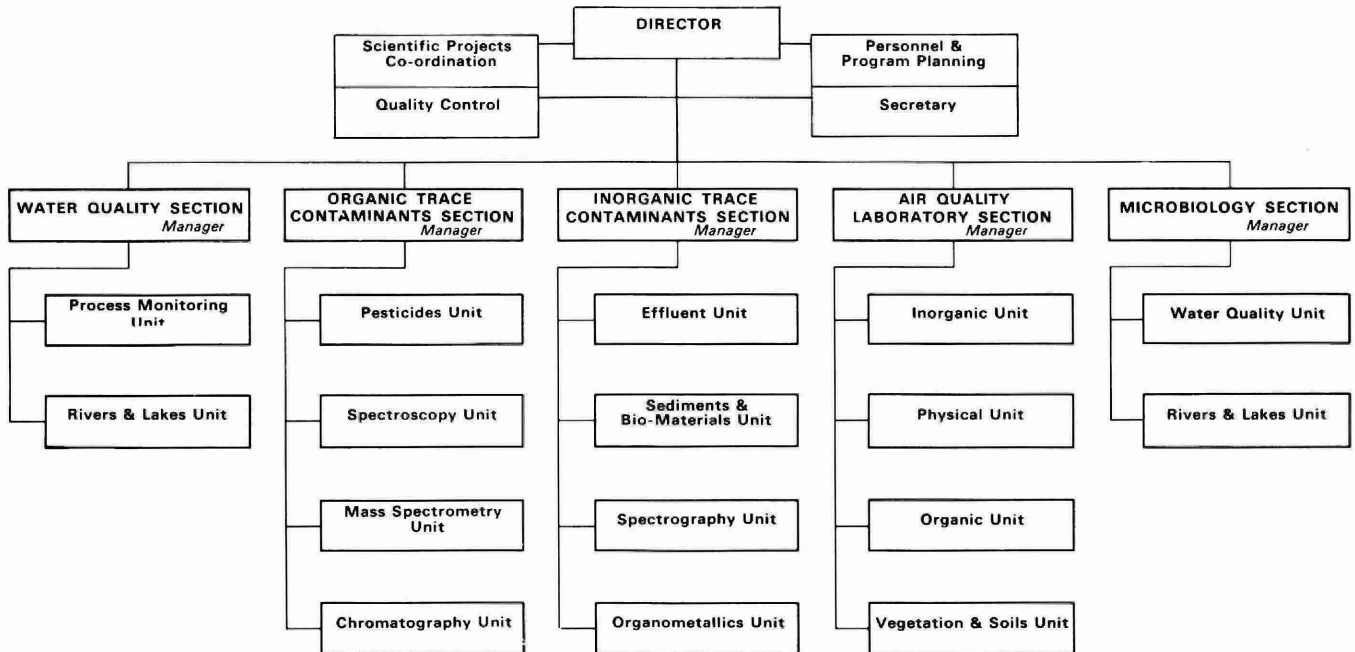
NORTHEASTERN REGION (5)



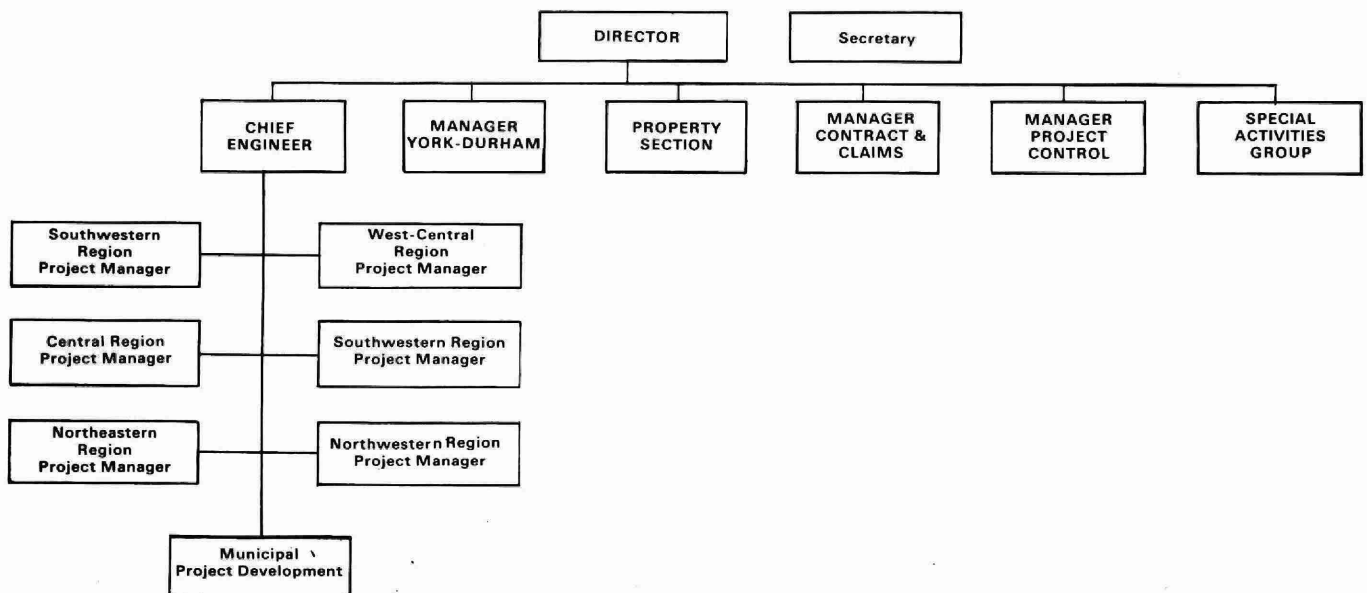
NORTHWESTERN REGION (6)



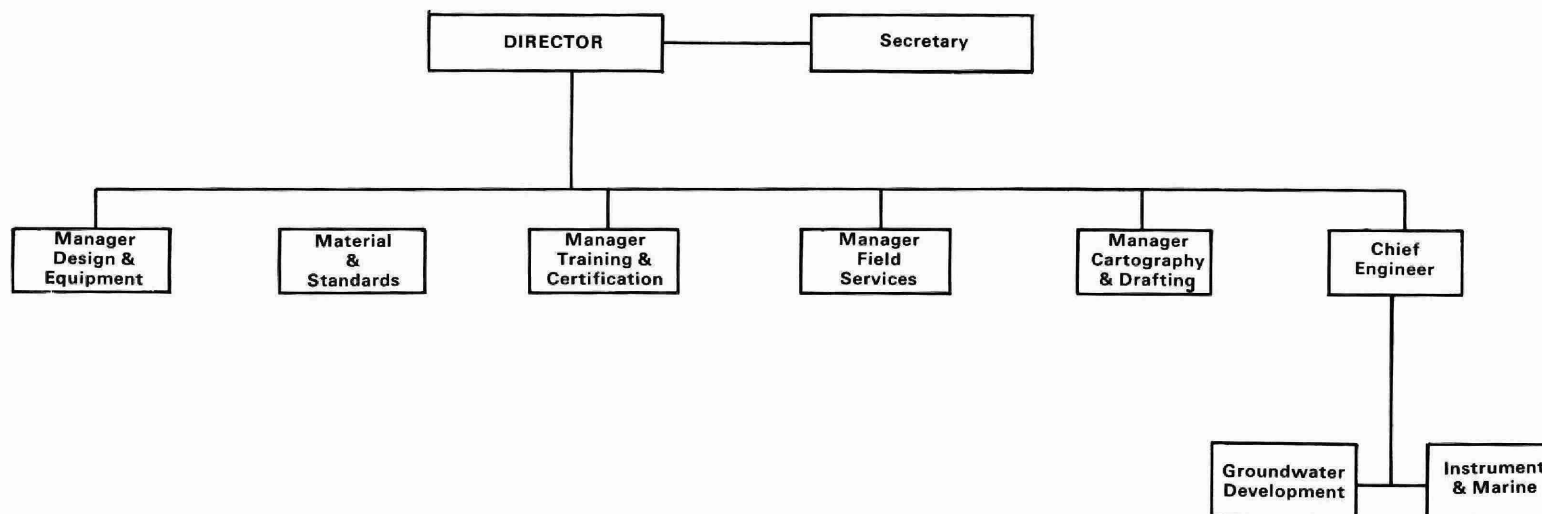
LABORATORY SERVICES BRANCH



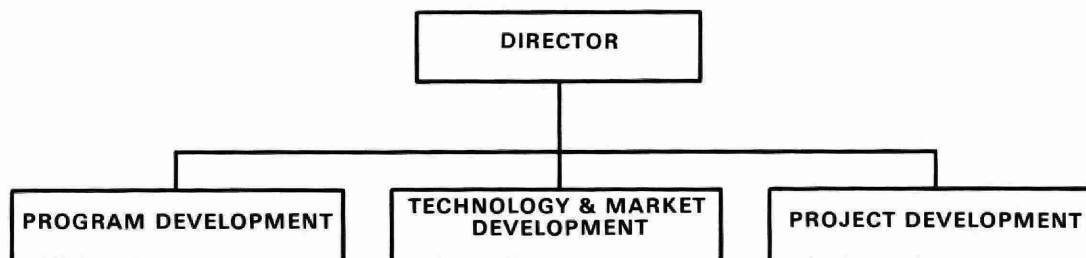
PROJECT CO-ORDINATION BRANCH



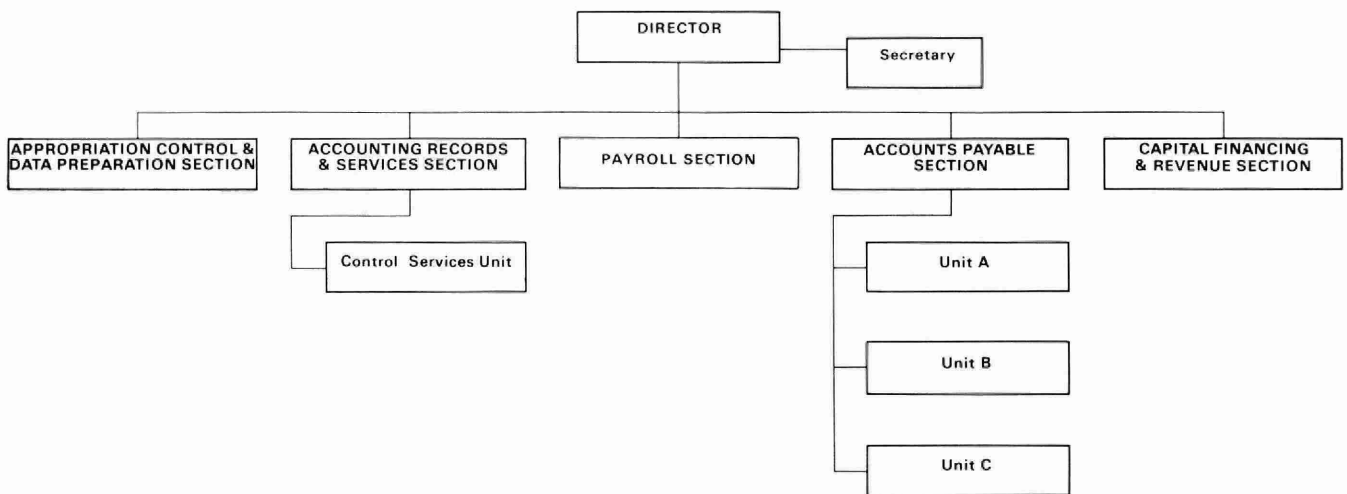
TECHNICAL SERVICES BRANCH



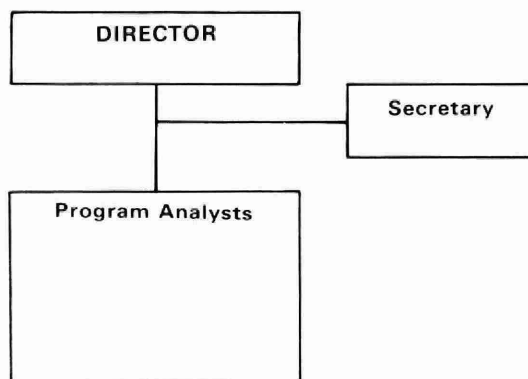
RESOURCE RECOVERY BRANCH



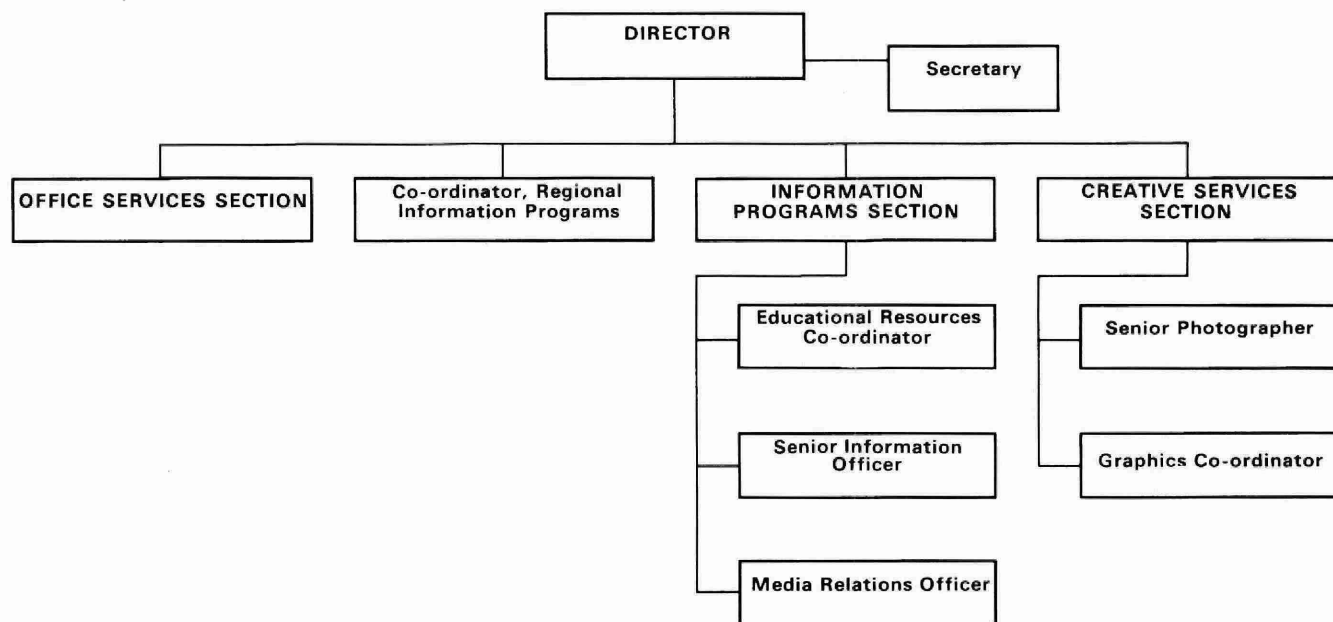
FINANCIAL SERVICES BRANCH



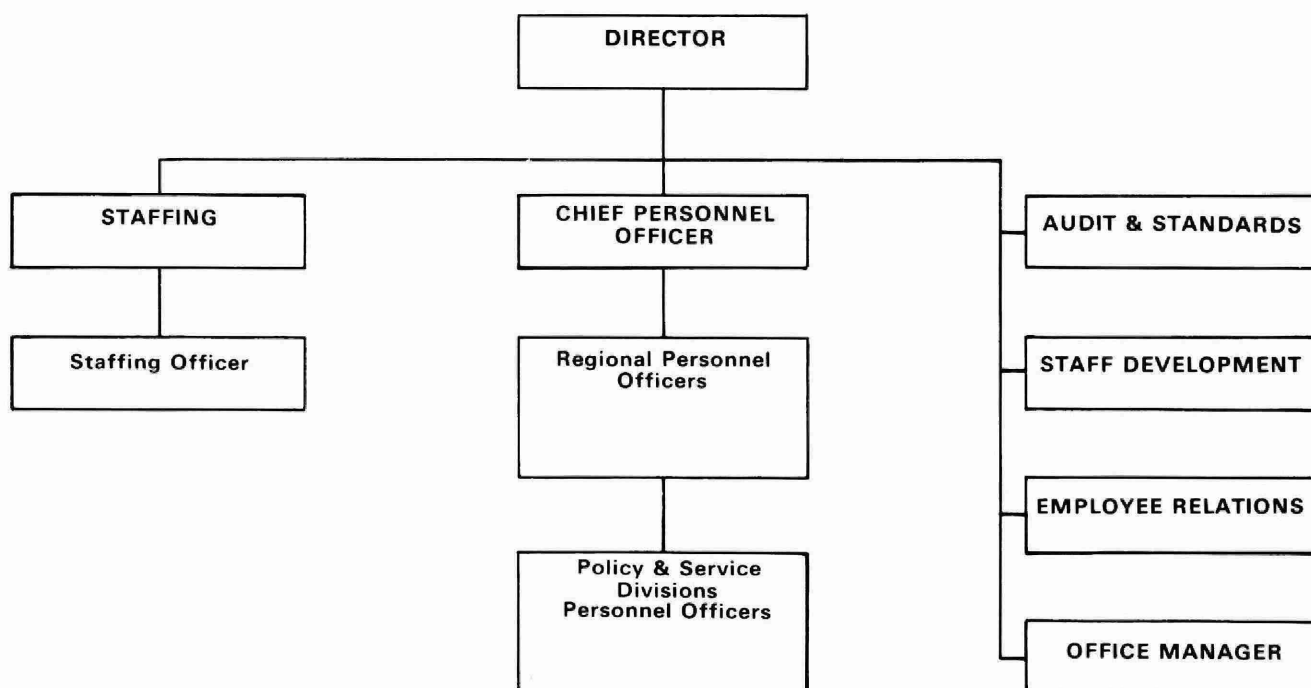
PROGRAM PLANNING & EVALUATION BRANCH



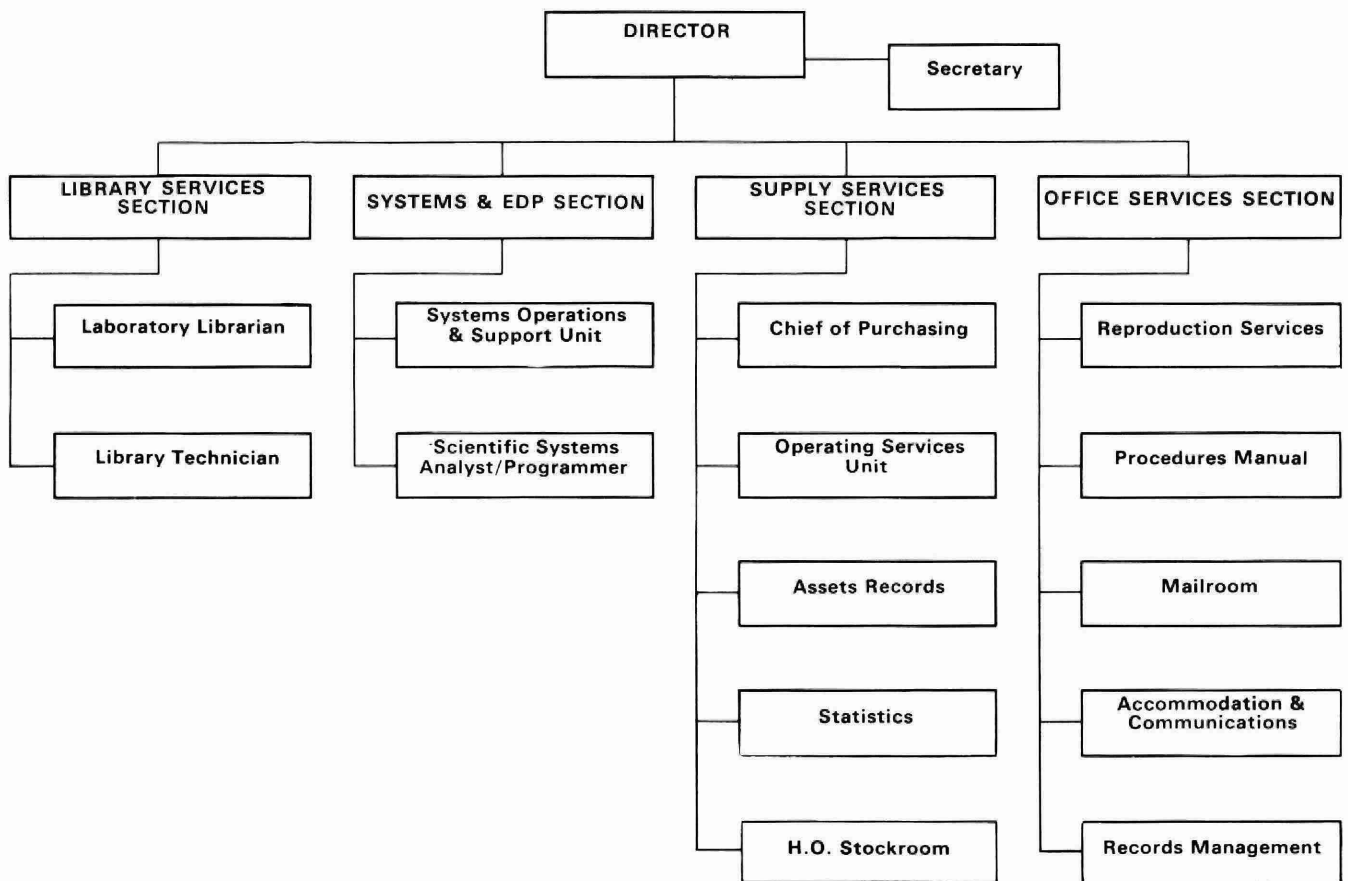
INFORMATION SERVICES BRANCH



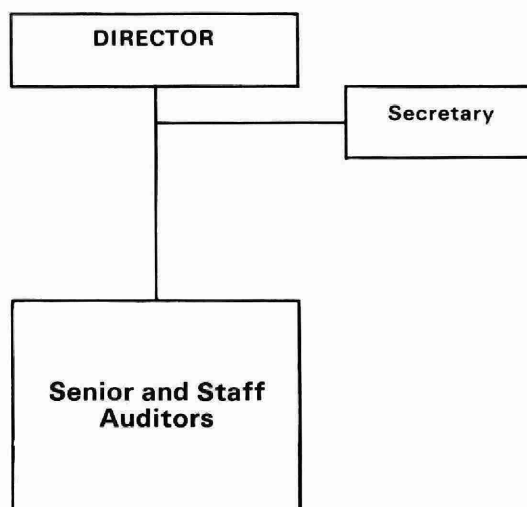
PERSONNEL SERVICES BRANCH



ADMINISTRATIVE SERVICES BRANCH



INTERNAL AUDIT BRANCH



Published by
Information Services Branch
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5



96936000009446